

With fondest memories, W.O.

W.O. Mitchell fondly remembered using his own "freefall" writing method.

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What's at stake in the gambling debate

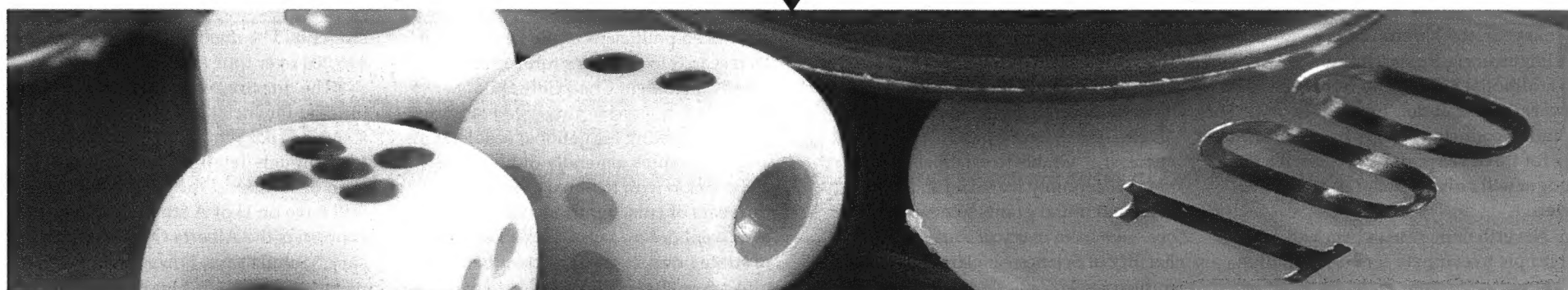
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UNIVERSITY OF ALBERTA

folio

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Keeping the network humming

Grover's groundbreaking thesis leads to a \$5.5 million agreement

By Judy Goldsand

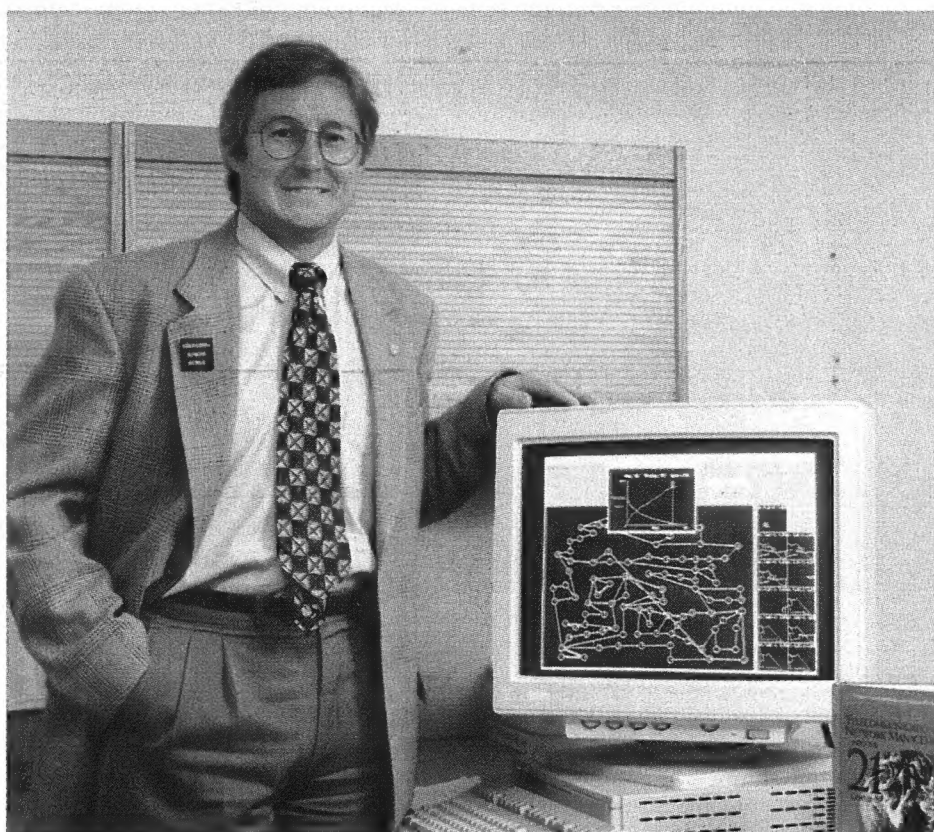
Your telephone; the Internet; 911 emergency services; credit card verification; computer banking; airline and travel reservations; blood bank networks....

Telecommunications play such a central role in our lives that a breakdown is, at best, inconvenient and at worst catastrophic. Dr. Wayne Grover, professor in Electrical and Computer Engineering, is working to ensure it never happens.

Grover, who is also Chief Scientist for Network Systems at TRILabs, invented technology that allows communication lines to repair themselves in milliseconds. First proposed in his PhD thesis in 1989, development of the self-healing network has been a major focus of Grover's research. This research led TRILabs to a recent \$5.5 million sponsorship and licensing agreement with MCI, the second largest telecommunications company in the world. "It's very gratifying," says Grover, "to know that MCI will now have their own people take the patented proof-of-concept and move to engineering, design and production stages."

Grover, a former competitive triathlete, wrote the first textbook chapter on self-healing networks and is now writing the first full book on the topic. *Survivable Transport Networks* will be published in 1999.

Telecommunications links involve huge amounts of information transported through fibre optic cables. "Many people think that the Internet is a separate communication system," says Grover, "but it's not. For example, all the telephone calls and data communication leaving the University of Alberta go to a TELUS con-



Dr. Wayne Grover professor in Electrical and Computer Engineering and Chief Scientist for Network Systems at TRILabs

trol centre a few kilometres away. There, everything going to one destination is multiplexed together in very high speed digital signal units. Inside one of these 150 megabit per second tributary signals there might be several thousand phone calls and an equivalent amount of data communication. It's the self-organizing management of the connections between those signals that we work on."

Network survivability has always been an industry concern. Shutdowns, such as the closing of JFK Airport for several hours because of a cut cable, are costly. To deal with network breakdown, the design of both ring-based networks and mesh networks incorporates some spare capacity through which signals can be rerouted. Traditionally, the restoration of communication links was handled cen-

trally. But central control requires so much information and maintenance of such a huge database that instant repair is virtually impossible, he explains.

In Grover's self-healing mesh network, a microcomputer is imbedded in each network node. If the section between nodes is damaged, all nodes spontaneously cooperate to redirect the failed signals. Besides speed and self-organizing control, there's the added advantage of requiring a relatively small amount of spare capacity. "Now," says Grover, "we can design networks that will be 100 per cent survivable and need as little as 30 per cent redundancy. For network operators, that means significant capital cost savings, particularly over long distances." ■

- TRILabs was founded in 1986 by sponsors: Nortel, University of Alberta, and Government of Alberta
- It is the largest not-for-profit telecommunications research corporation in Canada with 180 employees working in Edmonton, Calgary, Regina, Saskatoon and Winnipeg, with links to universities in each city.
- Many U of A professors hold joint appointments with TRILabs
- TRILabs funds two U of A faculty positions in Electrical and Computer Engineering and offers research opportunities to between 20 and 39 U of A graduate students annually.
- Since 1986 TRILabs has provided \$1.8 million in U of A scholarships and has invested in excess of \$32 million in its Edmonton facility.

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A good news budget—finally

Federal Government keeps its commitment to increase funding for post-secondary education

By Michael Robb

Next year, the Natural Sciences and Engineering Research Council will have an additional \$60 million from the federal government. But don't get too excited: The granting council's budget has been shrinking for three years and the council's total budget will only be restored to 1994-95 levels.

Nevertheless, researchers will have a larger pie to compete for—\$494 million next year, compared to the \$434 million NSERC had to spend during the previous fiscal year. The increase in granting council budgets announced last week as part of the federal budget was greeted enthusiastically across the country. NSERC president Tom Brzustowski said the Liberal government's increased emphasis on the importance of science and technology "holds out the promise that our young scientists and engineers with advanced training will find satisfying careers in their own country."

Next year, NSERC's budget will increase by 14 per cent; the Medical Research Council's budget will increase by 12 per cent; and the Social Sciences and Humanities Research Council's budget will increase by seven per cent. Assuming U of A medical researchers received roughly the same proportion of the MRC budget, the increase could mean roughly \$1.8 million in additional funding.

Dr. Paul Davenport, chairman of the Association of Universities and Colleges of Canada, said, "The federal government has made investment in knowledge and accessibility a top priority and we applaud them for this."

It's very positive news, a step in the right direction, says the Associate Dean of

Science (Research), Dr. Bill Graham. "Over the years of cuts, NSERC grantees in the Faculty of Science have worked extremely hard to maintain or increase their funding levels—for the most part, they have been successful. Grants to established researchers will certainly increase, and it's really vital that initial grants to new appointees—we have many of those in the Faculty of Science—be larger and more numerous."

"We don't yet know how NSERC plans to distribute the restored funds among its programs. I think the largest part should flow into its research grants operation, rather than the various partnership programs."

A spokesperson for the Humanities and Social Sciences Federation of Canada wasn't as enthusiastic about the increases, however. "Even if the budget of the three granting councils is restored and increased, it is clear that the community represented by SSHRC has not effectively

convinced politicians of the key value of its research to Canada's future," says SSHRC President Chad Gaffield.

U of A researchers and graduate students competing for national scholarships and fellowships generally did well, in comparison with national averages, during the years of cuts, but those national averages went down, says Carl Betke, director of strategic analysis. "The chief benefits U of A researchers will probably expect are better chances for success [availability of more grants], and possibly more dollars on average per grant." That will depend on the nature of each grant program and on the strategy each council decides to pursue, he says.

The big news for students was the creation of the Millennium Scholarship Foundation, a \$2.5 billion endowment to fund 100,000 annual scholarships to low and medium income earners beginning in the year 2000. The average scholarship is expected to be \$3,000 a year for full-time

students. The maximum is expected to be \$15,000 over four academic years.

The director of emergency aid in the Student Financial Aid and Information Centre, Erika Schulz, says there simply isn't enough detail yet to calculate what kind of an impact the new federal program will have on U of A students. "Our first concern is the Alberta Opportunities Bursary," Schulz says, however, provincial program details are also sketchy at this point.

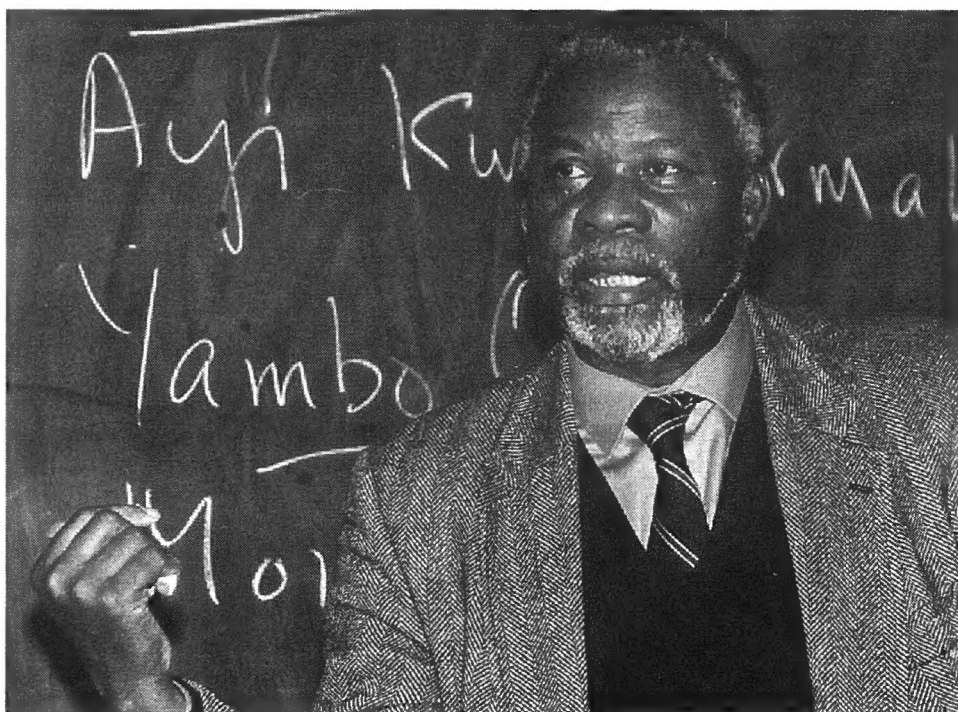
"It's just one giant question mark."

Faculty of Arts Associate Dean (Research) Dr. Gary Libben said the government has taken a step in the right direction, but he is disappointed with the funding increase to SSHRC relative to the other granting councils. He said it was particularly important that the dollars be there for the many new people the Faculty has hired to get their research programs underway. "We are particularly dependent on government funding." ■

African writers producing literature of disillusionment

Africa Week speaker says the continent's literature suffers from continuing political repression

By Michael Robb



Dr. Abiola Irele, African American Studies, Ohio State University

Many of Africa's writers are producing a literature of disillusionment—and many are doing it from afar, in exile, says Dr. Abiola Irele, an African American Studies professor at Ohio State University.

The prolific writer, thinker and scholar of African culture told the Africa Week conference last week the reasons for this situation are fairly straight forward: The new order created in the continent's post-colonial period reflected no change. The black ruling class simply stepped into the shoes of the departing white ruling class and in many cases maintained the status quo. Few countries on the continent have successfully reformed their economies.

Most African writers, filled with a utopian vision of society—some even seeing themselves as prophets—have not been content to simply write about the situation, he said. "There's a thin line between writing and political commitment."

During the colonial period, African writing was a powerful literature of protest. It promoted the ideal image of Africa. "There was no room for truth or realism."

The state of African writing has precedents. Writers in Russia, Western Europe,

India and Latin America have gone through the same phases as their societies attempted to make the transition from feudal and agrarian societies to modern societies. Western society has gone through this process. "We ought to be able to learn from that."

Citing writers such as Yambo Onolquem, Mongo Beti, Ahmadou Kourouma and Wole Soyinka, Irele said the moral decay of African societies in the post-colonial period writing is a dominant and pervasive theme. Some of the literature is particularly dark, tackling the moral issue of whether or not Africans can ever fulfil the promise of better societies. Particularly painful to confront, he argued, has been the destructiveness of ethnic nationalism.

"I don't want to suggest that all writers and intellectuals are dissidents," he said, because lots of professors, writers, and even philosophers are collaborators with repressive governments. The threat of losing your job is a powerful force, he said, because when you don't have a job in Africa, you're in serious trouble. ■

Austria sets up U of A research base

By Lucianna Ciccocioppo

The Faculty of Arts and the government of Austria have teamed up to establish the Centre for Austrian and Central European Studies, slated to open in September.

The centre will encourage and support studies in Austrian art, history and politics, from the days of the Austro-Hungarian Empire to the partners making up the European Community of tomorrow.

Dr. Patricia Clements, dean, says the U of A was selected as the fifth centre on the continent because of its expertise across departments in the social sciences, humanities and fine arts. Other centres are at Stanford, Harvard and Rice Universities and the University of Minnesota.

The U of A site will offer unique undergraduate courses in addition to graduate courses and will publish and sponsor research on Austrian migration. The Austrian government will provide the financial support for associate directors and guest speakers throughout the year.

More important, Austrian Ambassador, Walther Lichem, says his government is committed to adding to the U of A's "grand Austriaca collection of books and journals." "This commitment is backed with a grant of 750,000 schillings (about \$84,000) from the Austrian government."

Dr. Franz Szabo, currently on sabbatical from Carleton University, is the director of the centre. He completed his PhD on the Hapsburg monarchy at the U of A. Szabo says the U of A collection on central European studies is the best in Canada and this will be an opportunity to exploit the full potential of the works. Moreover, with 60 per cent of Austrians living in Western Canada, the U of A is a fitting choice for the centre.

Szabo is working on bringing a panel of experts from various states in the European Unions to the U of A for "a high-powered seminar on the meaning of European Expansion for Canadian businesses and the Canadian community." Austrian composer Carl Czerny and his unknown works will be featured at an international music festival, and a joint symposium with the University of Minnesota will focus on the "nationalist myths and pluralistic realities" of central Europe. ■

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What's at stake in the gambling debate of '98?

Some politicians say gambling is entertainment, while researchers say the comprehensive costs aren't being investigated

By Michael Robb

Airdrie-Rocky View MLA Carol Haley says gambling is a legitimate form of entertainment for many Albertans. "Restricting access will not prevent Albertans from seeking gaming opportunities."

But according to the mayor of Drayton Valley, Tom McGee, provincial politicians like Haley have passed the buck, leaving municipalities to deal with the contentious issues associated with gambling.

"It's in your face every day," says McGee. He says his local council will be

"The impact on families and society is immense. An alcoholic can blow \$400 in one night, but I've seen problem gamblers blow three generations of family wealth in one week,"

Robert Hunter

conference on VLTs and Electronic Gambling: Issues and Impacts, February 18-20, sponsored by the Faculty of Extension.

Haley says the issues arise out of the success of the experience in the province. In 1993 the province took in gaming revenues of about \$207 million. By 1996/97 revenue had grown to about \$476 million.

"No one expected that growth," says Judy Gordon, chair of the provincial task

force on gambling. Gordon says that growth means 10,000 charitable and religious groups now benefit, hospitality industry profits have increased and more money has been allocated to Alberta Alcohol and Drug Abuse Commission to treat problem gamblers.

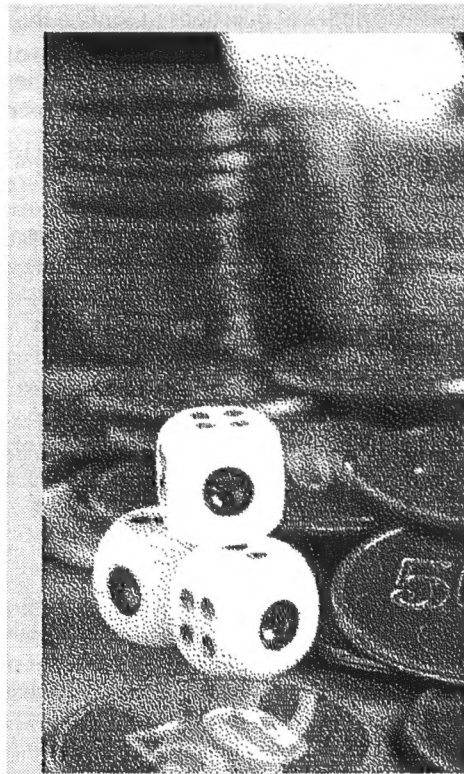
"If the money ceased today, we'd have to find it elsewhere," says Gordon. We'd also have to find an industry to replace the 11,000 jobs that now depend on gaming.

Barry Pritchard, vice-president of Casino ABS, says in 1996 about \$17 million from casino revenues poured into provincial charities' coffers. Every year, over 2,000 charities—service clubs, sports organizations, arts groups and educational groups—raise money through casinos.

David Elton of the Max Bell Foundation, says there's good information on where the money from gambling goes, but not a lot on where the money comes from. And there are emerging issues. There's evidence to suggest that a whole new cadre of adolescents who play video games have graduated to slot machines, says Dr. Harold Wynne, a local researcher who has conducted numerous problem gambling prevalence studies and gambling impact assessments.

Perhaps the biggest issue, however, is whether we've really tallied the costs to society. University of Nevada sociologist Frederick Preston says many problem gamblers don't even know they have a problem. It's easier to calculate the social costs of alcoholism—you know who dies—but it's much more difficult with gambling. Can you, for example, attribute marital breakdowns to problem gambling or, say, criminal activity?

We do know that problem gamblers attempt suicide much more frequently than other people, says Bo Bernhard, a University of Nevada gambling studies expert. Alcoholics can attribute their behavior to drunkenness, but gamblers typically jump



- Gambling revenues for the Alberta Government increased 24 fold in the past 20 years.
- VLTs account for 58 per cent of the province's gross gambling revenues.
- Slot machines account for 27 per cent of charity profits in Edmonton casinos.
- The annual per capita wagering rate for Albertans aged 18 and over is \$1,344.
- 11,000 jobs in Alberta depend on the gaming industry.
- Two out of every three dollars from gambling goes into general provincial government revenues; one out of every six dollars to the industry; one out of every six dollars to community groups.
- In 1995, \$27 billion was wagered on legal gambling in Canada.
- In 1995, the provinces netted \$4.6 billion from gambling.
- Five per cent of adult Albertans have gambling problems and seven per cent of the AADAC caseload

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to the conclusion they are evil. And loved ones ask, "Why is he doing this to me?"

Bernhard says VLTs are changing the gambling landscape, encroaching on other forms of gambling. It certainly has the potential to shift society markedly, adds Robert Hunter, the founder and director of Nevada Psychological Associates. VLTs have an element of immediacy, lead players to believe they have a perception of skill, can increase their winnings and allow players to "zone out" or block out external stimuli, he explains.

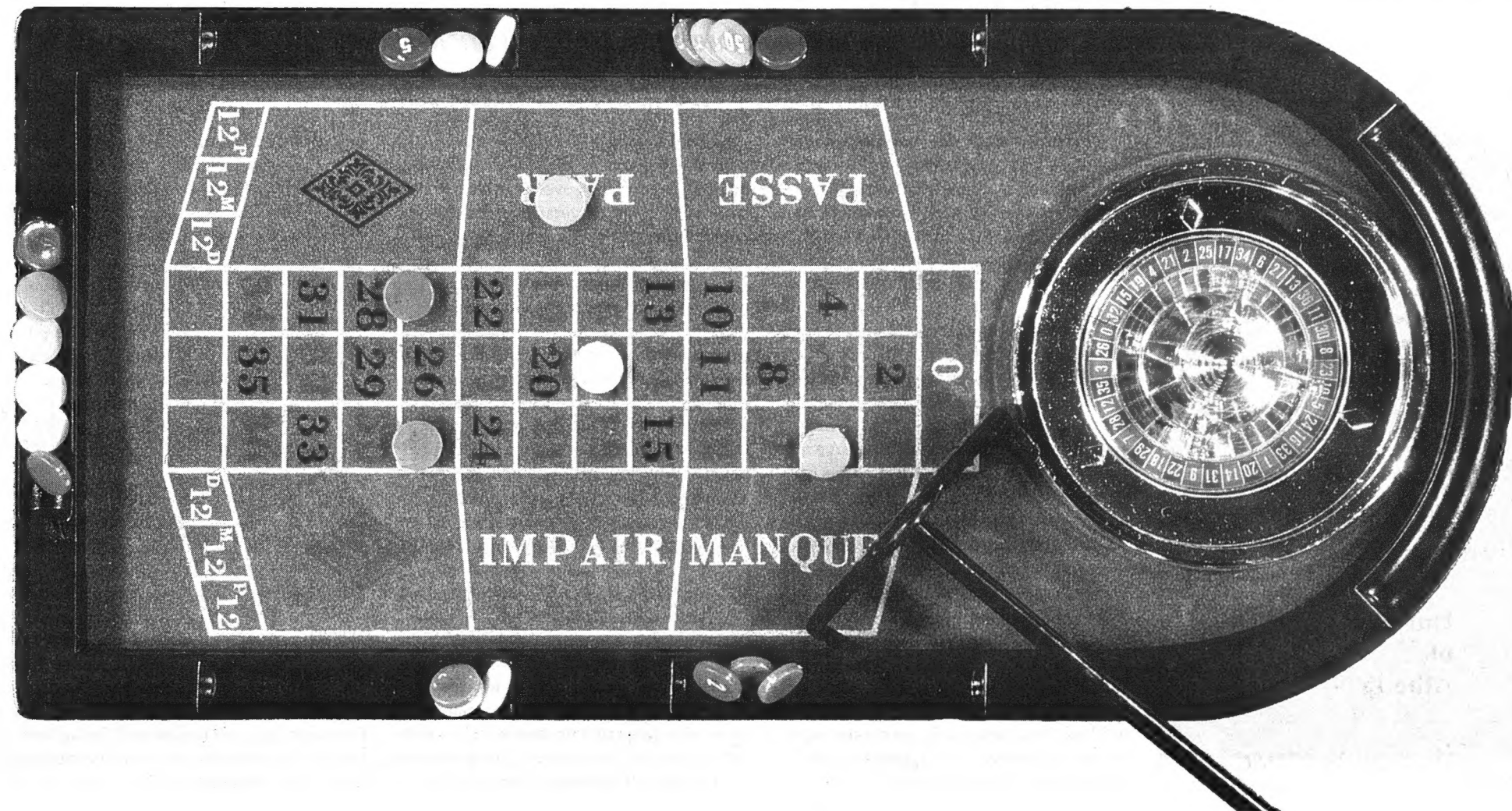
Bernhard says some VLT gamblers believe the stakes are reduced, but last year he encountered two people who had lost over \$100,000 in a year.

"The impact on families and society is immense. An alcoholic can blow \$400 in

one night, but I've seen problem gamblers blow three generations of family wealth in one week," says Hunter. South Carolina researcher Dr. Frank Quinn says he's seen one woman lose \$12,000 in one afternoon.

Virtually no research is being conducted now on prevention of addictive gambling, says Quinn. Education and early intervention will be the issues of the future, adds Hunter, also the clinical director of Charter Hospital of Las Vegas' compulsive gambling unit. "We don't even know how to deal with early intervention yet."

But MLA Carol Haley insists the provincial government is committed to helping problem gamblers. Treatment can work and will improve, she says. AADAC received 30 per cent more funding this year, says Haley, about \$3 million, for gambling counselling. ■



Photos: Tina Chang

Watching the Quebec secession reference

By David Schneiderman, executive director, Centre for Constitutional Studies

There is no denying the significance of the task lying before the Supreme Court in the Quebec secession reference. Yet, for the duration of much of the four days, the Supreme Court hearing made for poor home viewing (in contrast to, say, women's curling at Nagano). In most appeal hearings, the justices ask probing questions of lawyers providing some indication of the direction of judicial thinking on the matter under appeal. Here, regrettably, the justices reserved questions for only a few hours of the very last day. While there were a few interesting moments during the first three days of argument, such as Guy Bertrand's one hour and twenty minute soliloquy performed entirely without notes, this performance was the exception.

Many observers, however, were enthused by the nature of questions put by the Court to counsel for the federal government and the amicus curiae (arguing the Quebec government's position) on the last day. The Court appears to have resisted being locked into the framework posed by the federal government in its three questions: whether unilateral secession is contrary to the Canadian constitution, consistent with international law, and, in the event the answers provided by domestic and international law were inconsistent, which took priority. The Court's questions suggest the justices are interested in a variety of post-secession scenarios the federal government desperately wants to avoid discussing. What happens if negotiations break down? Must the federal government act to protect territorial interests of Aboriginal Peoples? What about other minority interests within the territory? At what moment would the federal government have an obligation to remove itself from Quebec territory?

The Reference Questions

The federal government's strategy was to craft a series of questions to confine the Court's deliberations to a few seemingly contentious matters. To the extent that the Court has moved beyond the three questions, the strategy appears to have backfired, and this aside from the opposition the reference has generated (even from federalist forces) within Quebec. There is little doubt that, as regards the first question, the Canadian constitution does not comprehend the unilateral secession of a province from the federation. This could not be achieved within the existing framework without, at the least, the consent of the federal government and the consent of most, if not all, of the provinces. Sovereignists, of course, argue that secession would take place outside of the existing framework and so the question of consent really is beside the point. On the second question, the Court has no specific expertise with which to answer complex questions of international law. But it seems doubtful, on the basis of existing precedent, that international law would condone unilateral secession. The third question, from a domestic constitutional viewpoint, also is answered easily: international law does not take precedence over the constitution. The questions, then, either do not pose difficult constitutional issues or are in regard to matters beyond the expertise of the Supreme Court of Canada. Rather than seeking answers to some knotty questions, the federal government likely had two other objectives in mind: (1) to be seen as strong in opposition to sovereignists (part of the so-called Plan B strategy), and (2) to have in reserve rule

of law arguments with which to sway the soft sovereignist vote in time for the next Quebec referendum.

The Court's Questions

Intervenors such as Guy Bertrand and the James Bay Cree, pushed the Court to consider broader dimensions than those directly posed by the three questions. The comments of the Minister of Justice on the eve of the reference, that unilateral secession would be an extraordinary set of circumstances not comprehended, in our opinion, within the existing constitutional framework suggest the outer limits of the constitution really are at issue, as sovereignists have argued. The issues are made even more complex by the fact that the Aboriginal claim under international law may be as strong as, or stronger than, the Quebec claim. It is tempting, then, to applaud the Court's refusal to be manipulated in this way. The predicament the Court faces, however, is that the further it moves to the nether regions of constitutional text the less legitimacy it has to rule on these issues.

Questioning the Court

Though we should be prepared to establish the rules of the game, and though an opportunity to rule on these issues may not arise again soon, it is unseemly for the Court to move beyond the confines of the reference questions. Many interested parties, including eight of the ten provinces (who did not appear as intervenors in the reference), made no representations to the Court in writing or orally. If the Court was

being asked to settle definitively the myriad of legal/political questions that would arise in a unilateral act of secession, at the very least all of the interested parties, including the province of Quebec, should be party to the proceedings. This would mean more than simply inviting the government to intervene. It would require a cooperative and consultative process; governments would mutually participate in the drafting of reference questions and would consent to the choice of the decision maker who would provide answers to those questions.

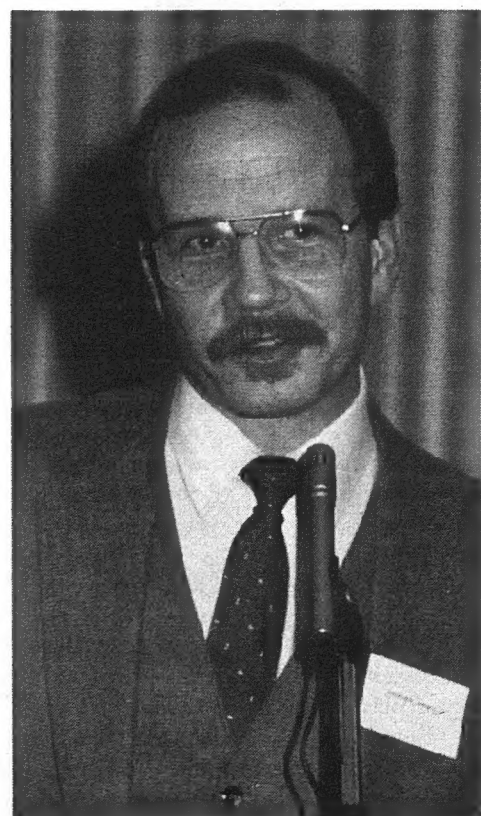
This is not to say that Canadians in general and Quebecers in particular should not have an intense interest in identifying and speaking to those outer limits. Rather, it is to say that the Court has no particular experience or expertise to bring to these issues and that there may be decision-making venues better suited to the particular task. Nor do I mean to suggest that the law or legal analysis have no contribution to make as concerns post-secession scenarios. Rather, I want to question the propriety of the Supreme Court assuming this task on its own, particularly in the current context where questions have been drafted by one party and where other important political constituencies have a direct interest and have not been heard.

The legal questions before the Court are not entirely irrelevant or beside the point. It would be enough if the Court turned its mind to these highly charged matters. But it would be too much if the Court assumed the role of ultimate arbiter by which Quebec, Canada, and Aboriginal peoples were to settle once and for all the situation of a sovereign Quebec. ■

Low tuition for foreign students is good business, not charity—Dr. Stephen Arnold

1998 Friend of Africa says government forcing universities to exploit foreign students for tuition revenue

By Lee Elliott



Dr. Stephen Arnold

Dr. Stephen Arnold, professor, modern languages and comparative studies, has been honored by the newly formed U of A African Society as the 1998 "Friend of Africa"—the individual in the Greater Edmonton area who has done the most to promote interest in African culture and issues.

And after a 28-year career at the U of A marked by distinguished scholarship and hard work to promote the interest of African culture on campus, he's determined to leave a legacy that matters. To that end, Arnold, who is currently on sick leave and preparing for retirement, donated his extensive library to the U of A at the February 28 awards ceremony. A portion of the tax benefit of the gift is to go to the Northern Alberta Brain Injury Society.

"My career was most blessed by students—Africans and Canadians interested in Africa, who have gone on to significant careers of their own," said Arnold. "Their achievements are my greatest professional source of pride and satisfaction. My family and I all owe them a debt we cannot repay. Next to my family, Africa has been the greatest experience of my life."

Arnold wants to ensure Africa remains a great experience in the U of A culture, but warned current government cutbacks have pushed the university to exploit foreign students for revenue. The following is an excerpt of his speech:

"Alas, I do not teach any more, but as a parting shot here at the wonderful U of A, I would like to register my shock and dismay to learn that the government has put the administration into the mercenary posture of seeking to exploit international students for revenue. The African population among us has shrunk in the last few years and we are the much poorer for it—as a university and as a society. A big part of the human soul is Africa and African, and it is being sold to the forces of the market. If our governors could go to an African market they would hear the laughter, witness the drama, and understand that without a strong contingent of Africans and other international students of modest means among us, our local soul will pale into pernicious anemia. Shame on those who force universities to define everything they do by a bottom line mentality!

I recall with gratitude that I went to

university in France, as a foreigner, tuition free. Two of our children have followed there, paying less than a thousand dollars each a year. France is not a particularly generous country, but it sees its own interest in sharing its intellectual and spiritual wealth. Why can't WE? Let us help the spiritually impoverished government with its logic in a language they might understand: low tuition is not ill-affordable charity; it is neighborly good business."

Arnold is the former associate dean of the Faculty of Graduate Studies and Research. He has held both a McCalla Research Professorship and a Killam Annual Professorship and has earned the highest title among Nkambe people of North West Cameroon—honorary chief.

With fondest memories, W.O.

By Merle Martin, receptionist, External Affairs

The following was written "freefall" using "Mitchell's Messy Method."

"Help!" I wailed into the phone. "Talk to me like W.O. Mitchell."

I was pleading with my husband Jerome. I was alone in a room at the Banff Centre attending a University of Alberta retreat and it was 11:30 p.m.

"I'm sorry to call you so late but I'm desperate. Were you sleeping?"

"No," he lied. "Just watching the news and dozing." I pictured our bedroom, black, lights out, Jerome snuggled down, sound asleep for the night after a long, hard week at work.

"We've just finished working and our team is supposed to present our ideas in a skit tomorrow morning. Each of us is supposed to be a distinguished alumnus of the University of Alberta, and I'm supposed to be W.O. Mitchell!"

The next morning, my script was ready after a night of rewriting and rearranging notes I'd made on many sheets of telephone pad paper—a trick I learned from W.O. Mitchell when he was being interviewed on CBC's "Morningside." W.O. said he wrote ideas as they came to him on filing cards, then he put them away. Whenever he needed an idea he would look through his card file, select this and that, arrange them and then rearrange them. His technique was working for me.

The chairman of the retreat told the rest of the group to imagine they were at the Jubilee Auditorium at a U of A telethon fund raiser. The master of ceremonies was President Rod Fraser (ably played by Carl Betke) and the folks manning the phones, our own distinguished alumni. Fellow "actors" played Joe Clark, Marg Southern from Spruce Meadows, Jane Ash Poitras and Amanda Forsyth among others.

It's my turn. I've got three minutes.

"I'm W.O." (pause) "Mitchell." Oh sure, the audience thinks. The no-lipstick lips and my normally gelled to perfection white hair mussed to just the right level of dishevelment is a nice touch.

"When you get to my stage in life, you want to spend all your time with the people you love. Isn't that right Merna." Now they know I know W.O. Mitchell's wife is named Merna.

"Stand up and say hello to the folks Merna." And a surprised and non-cued Myrna Snart (how convenient for me) stood up and waved.

"... And with things that are important to you—like the University of Alberta ... The other day, when I was in High River, I was browsin' the net - surfin' the God-damned web." The audience nibbled.

"Ya've got one helluva website! And I thought, I gotta talk to Fraser!"

The nibble is a little stronger!

"Rod—ya gotta" (Vice-President of Research and External Affairs, Dr. Roger Smith is taking notes.) "and ya gotta...." (Boy, we've got some good ideas! Dr. Smith is still writing.) "Grain elevators!" (pause) "There's HUNDREDS of 'em!" (pause) "Rod, ya gotta get that website address up on the grain elevators!" I had them hooked.

"BALZAC!" (pause)

"DoubleyadoubleyadoubleyaDOTualberta DOTca!"

I'm not quite ready to land them yet.

"Now here's the part that's enough to give a gopher's ass the heart-burn!"

Roger Smith is still writing.

"You all know Saint Sammy." (pause)

"Lives out there on the prairie. (pause) "In his piano box." (pause). "Has them horses." (pause) "Clydesdales." (pause) "Corinthians I and II."

Now I had them and it only took me 10 minutes. I went overtime—just like W.O. Mitchell did when he accepted his U of A Distinguished Alumni Award at the Westin Hotel, September 30.

Awards were not unusual for W.O. He received honorary doctorates from the Universities of Saskatchewan (1972), Ottawa (1972) and Alberta (1975). In 1989, he received the Alberta Government's \$25,000 Sir Frederick Haultain Prize for Arts; in 1962, he was awarded the Leacock Medal of Humour for his collected edition of the *Jake and The Kid* stories. The Banff School of Fine Arts gave W.O. their first annual award—a gold medal, \$5,000 cash, and a residency at the Banff Centre School—in 1980. In 1973, Mitchell received the Order of Canada.

I first "met" W.O. Mitchell in 1967. I was a few months pregnant with our first child and after a long hard day as secre-

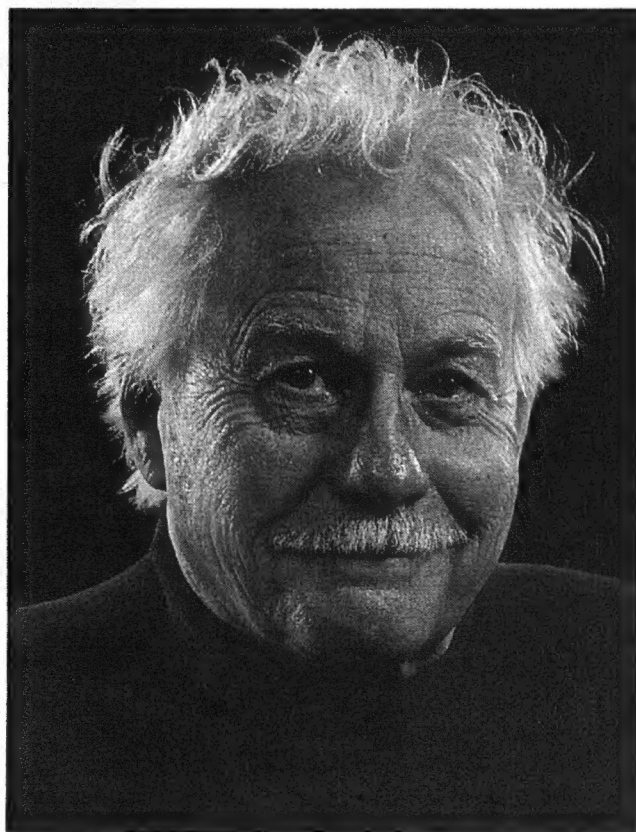
tary in the Department of Botany, all I could manage in the evenings was to prepare supper and sometimes do the dishes afterward. Usually, the four of us (W.O. in print, Jerome, the expected infant and me) went upstairs to bed and Jerome would read me *Who Has Seen the Wind* until the prairie images lulled me to sleep.

Years later, I would listen to "Morningside" on CBC. Whenever Peter Gzowski announced he would be visiting with W.O. Mitchell, I knew I was in for a special treat.

Besides teaching me about writing on filing cards, W.O. Mitchell explained my parents to me. In speaking about the Depression, he said: "It either freed you or enslaved you. You either spent the rest of your life hanging on to every cent because you never wanted to experience such poverty again or you spent your money because having seen such poverty you somehow knew it could never get that bad again." I lived with one of each.

One Christmas in the 1980s, I set up our old Uher reel-to-reel tape recorder in our dining room to record W.O. Mitchell's "Morningside" visit so Jerome could hear it when he got home. W.O. read *Brian's Skates*.

Brian's Skates. Yes, it's here. In the Safeway parking lot, I checked the table of contents of *An Evening with W.O. Mitchell* and closed the book immediately. As if by osmosis, I could feel the hope, the disappointment and the emotional rescue of this story rising in my throat and trying to seep from my pained heart through my eyes. I had surreptitiously bought the book for Jerome for his birthday while we were at Greenwood's. I didn't want him to see the tears in my eyes or to hear the crack in my voice when he returned to the car from buying milk and eggs.



W.O. Mitchell

Jerome read *Brian's Skates* at his Rotary club's Christmas luncheon this year and I watched the men and women around us swallow that lump in the throat several times as he read. I caught the shine of an occasional escaped tear welling.

Then there was the Citadel Theatre performance in July 1980 of *The Black Bonspiel of Wullie MacCrimmon* with such characters as MacBeth, Judas Iscariot, Guy Fawkes and the three Jack Browns aka Hickory Brown (the carpenter), Malleable Brown (the blacksmith) and Pipefitter Brown (the plumber). Mitchell's son, Ormand, writes on the flyleaf to *An Evening with W.O. Mitchell* (a collection of the author's best-loved performance pieces selected and edited by Barbara and Ormand Mitchell), "... the audiences loved him, laughing until they were sore, or until small but significant personal misfortunes befell them."

And what became of the babe in the womb whose first story read to him by his expectant dad was *Who Has Seen the Wind*? Paul Martin has become a PhD in Comparative Literature graduate student at the University of Alberta. At the same time, he and Rob Stocks (U of A '91 B Comm), a friend from high school, operate a virtual bookstore (Northwest Passages) dedicated to the study and promotion of Canadian literature on the Internet. Visit their site (<http://www.mwsolutions.com/canlit/>) and you will read "NWP is sad to inform those of you who reside outside of Canada (and might not have heard yet), that W.O. Mitchell passed away in Calgary on February 25th after a long illness. Log into our Webboard and share your thoughts about the career of this great man."

The day after W.O. Mitchell died, a total eclipse of the sun was experienced in Aruba in the Caribbean. This will be the last total eclipse visible in the Western Hemisphere this millennium. Is there any link between these two events? W.O., master storyteller, would have made the connection plausible.

To give W.O. Mitchell, the last word: "We writers are travelers, travelling from time to time; the time we're born and the time we reach a common destination, we are all mortals here." ■

folio letters to the editor

Father lauds Coke agreement

I must comment on the plebiscite regarding the Coca-Cola agreement negotiated by the Students' Union and the university. As a parent of three students who attend the U of A, I can assure you this is an important issue.

The issue here is one of access and one of an opportunity to turn almost \$5 million into student scholarships and bursaries over the next ten years. The issue is that \$5 million in student scholarships and bursaries would allow more than 5,000 students a \$1,000 bursary or scholarship.

At a time when tuition fees are increasing and students are finding it increasingly difficult to meet those tuition fee increases, I have to congratulate the Students' Union for their outstanding effort in leveraging their buying power and working with the university to strike this agreement with Coca-Cola.

This is not a question of corporatization of the university. Many will know that Coca-Cola already has almost 80 per cent of the market on the campus at the University of Alberta.

What this is, is an intelligent move by the students at the university to leverage their buying power and to get a net benefit for students, in the form of scholarships and bursaries, over the next 10 years.

I congratulate the Students' Union on their valiant effort and I wish them every success in their plebiscite. A plebiscite designed to increase and improve access to students at the University of Alberta and to assist them in paying for increasing costs of education.

Peter Graham

From New York to New Sarepta

By Lucianna Ciccocioppo

They always start with a group hug. They hold hands. They make their voices one before they head out on the stage to perform.

"They" are "Asani" Canada's only Aboriginal women's a cappella group. Asani is the Cree word for rock, a reflection of the importance of music in each of their lives.

Asani started off as a quintet in April of last year. About 20 women would meet regularly to sing. Some saw it as a hobby; others had professional aspirations. Eventually, five of them got together to form Asani, now a quartet of women with a variety of musical backgrounds and experiences.

Cathy Sewell and Sherryl Sewepagaham are both U of A students, with jazz and classical music backgrounds respectively. Sewell is working on her master's in education; Sewepagaham is doing an undergraduate degree in the same field. Donita Large will be a U of A student after completing the transfer program at Grant MacEwan Community College. And Debbie Houle, a new "Mom," also works with Region 18 Metis Settlements.

"It's good we're not all 'cookie-cutter' cut-outs of each other," says Sewell. The women enjoy flexibility in their voices, and a repertoire, that keeps things fresh and interesting. That means one might sing soprano for one song and then alto for the next. They could sing an original work, or do a hoops-and-poodle-skirt rendition of a "shoobie-doo" song.

It was enough to fascinate the New York organizers of the "Celebration of Canadian Choral Music" at Carnegie Hall last year. They encouraged Asani to come down after listening to their tape. Stepping out onto the stage after a line-up of choirs filled with 40 to 60 people wasn't easy. "I just wanted to turn away," laughed Sewepagaham, who couldn't describe the butterflies she had in her stomach. The reaction from the audience was "amazing."

"This was a dream for everyone. This is Carnegie Hall. I mean, you've made it if



Asani, clockwise from centre: Sherryl Sewepagaham, Debbie Houle, Donita Large and Cathy Sewell

you performed there," says Sewell who found support for her nerves waiting in the green room with the other choirs from across Canada.

From New York, it was on to New Sarepta, Alberta to sing for a group called Cross-Cultural Families of Native Chil-

dren. It's an organization of non-natives who have adopted native children and want to learn about Aboriginal culture. But big or small, Asani takes each gig very seriously.

"Every performance is wonderful in its own right. You can't say 'Oh, this is

Carnegie and nothing compares to it," says Sewell.

Indeed, what they find most gratifying is performing for children. "Children are the most honest critics and if they think you suck, they're going to tell you," says Sewell. Obviously, the children were mesmerized. Parents later thanked the group for a performance that kept active children enthralled a half hour.

But the women in Asani know they have stories to tell, and Aboriginal issues underlie their music. One, entitled "Elijah," is the Aboriginal voice for the pain endured in residential schools. It's also about strength and healing, says Sewepagaham, the composer, who looks towards rebuilding lost hope among native communities. She also wrote one on child abuse. She goes silent and doesn't explain any more.

You can hear the music of Asani on a compilation compact disc called *Northern Harmony*, and they hope to cut their first CD soon. At this point, they demur when asked how big an impact their music has had in and outside their community. But, with young girls in Hobbema squealing with delight to read Asani's name on a program, you can bet their fan base is expanding.

And they vow to never lose touch with their communities. That's why they remind each other with a group hug before each performance, says Sewepagaham. "If we're together off stage, we'll be together on stage." ■

- The World Music Concert is Wednesday, March 11, 8 p.m. in Convocation Hall
- Tickets are \$10/Adults; \$5/Students & Seniors
- For information, call the Department of Music at 492-0601
- You can catch Asani live on television, March 9th, on "A" Channel's "Big Breakfast" from 7 a.m. - 9 a.m.

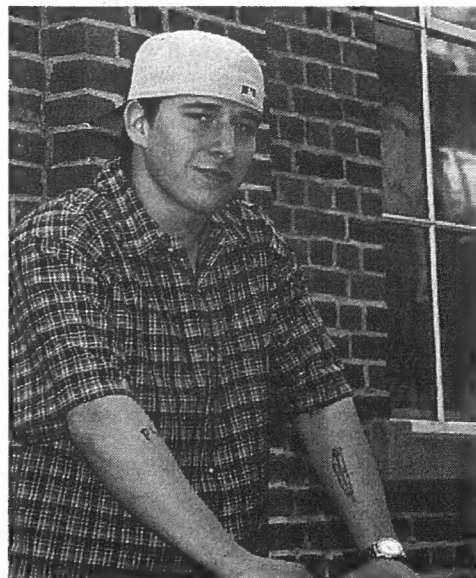
»» quick »» facts

"Bannock" tells it like it is

By Lucianna Ciccocioppo

Sitting in the Power Plant sipping a black coffee, the baseball-capped and beeper-toting Darren Tootoosis lights yet another cigarette. It's hard to miss the tattoos: an eagle feather on one arm and the Cree word for love on the other.

The conversation is personal. At 23, he's lived a lifetime of experiences already and talks about teaching "the young kids"



Darren Tootoosis, a.k.a. "Bannock," turns his poetry into rap music.

to stay away from drugs and alcohol. And he does so through his music.

Tootoosis, nicknamed "Bannock," is a rap singer. He gives his poetry life through this music, which he loves, not to glorify violence and substance abuse but rather, to preach against it.

Clean-cut. Sober. U of A student and father-to-be.

He's come a long way since he took his first drink at 12. And he's only looking forward, not back. "I've done a hell of a lot of growing since I changed my lifestyle," says Bannock. "Now, I can rap about it."

Life on the Blood Reserve was rough for a lot of people, says Bannock. "Just because we get things free doesn't mean our standard of living is any better. In fact, it's a hell of a lot worse." Bannock talks about the huge oil royalties Aboriginal youth receive when they turn 18. Cheques of 80 to 120 thousand dollars are not uncommon and many teens go on wild spending sprees: fast cars, exotic vacations, booze, drugs, and more recently guns.

Bannock says he was no different, until the day his cousin and mentor, Rex Smallboy, asked him to consider a music career. Smallboy is a recording producer with a studio in Hobbema. He had cleaned up his act and expected anyone who

wanted to work with him to do the same.

"I owe him a lot. At the time, I was still involved in drinking and what not. I didn't have much of a focus in my life: where I wanted to go, what I wanted to do, who I wanted to become," says Bannock. But Smallboy gave Bannock the push to sober up and start a music career.

One of his works is called "Poetry of Madness." He wrote it four years ago but reworked it recently for his upcoming concert on March 11. "Basically, it's about the shit I went through ... the friends I lost through suicides and homicides or accidents," says Bannock pensively. "It got to the point I was at a funeral on a regular basis ... every two months." Bannock stops to think and take another drag from his cigarette. "Having homies die high at the parties." That's a lyric from the song.

He hopes people will become more aware that life isn't always good on the reserve or in the inner city and points to the parallel experience of African-American urban youth. And perhaps if people learn something, "Adults won't always dump on the kids, who are the path to our future."

The music at the World Music Concert will be recorded and Bannock plans to re-master his performance and make cassettes to send to radio stations. Compact discs are

next but he hasn't made a lot of money from his music yet. "The money will come," says the now confident Bannock. "I'm looking for satisfaction for myself rather than trying to impress corporate bigwigs."

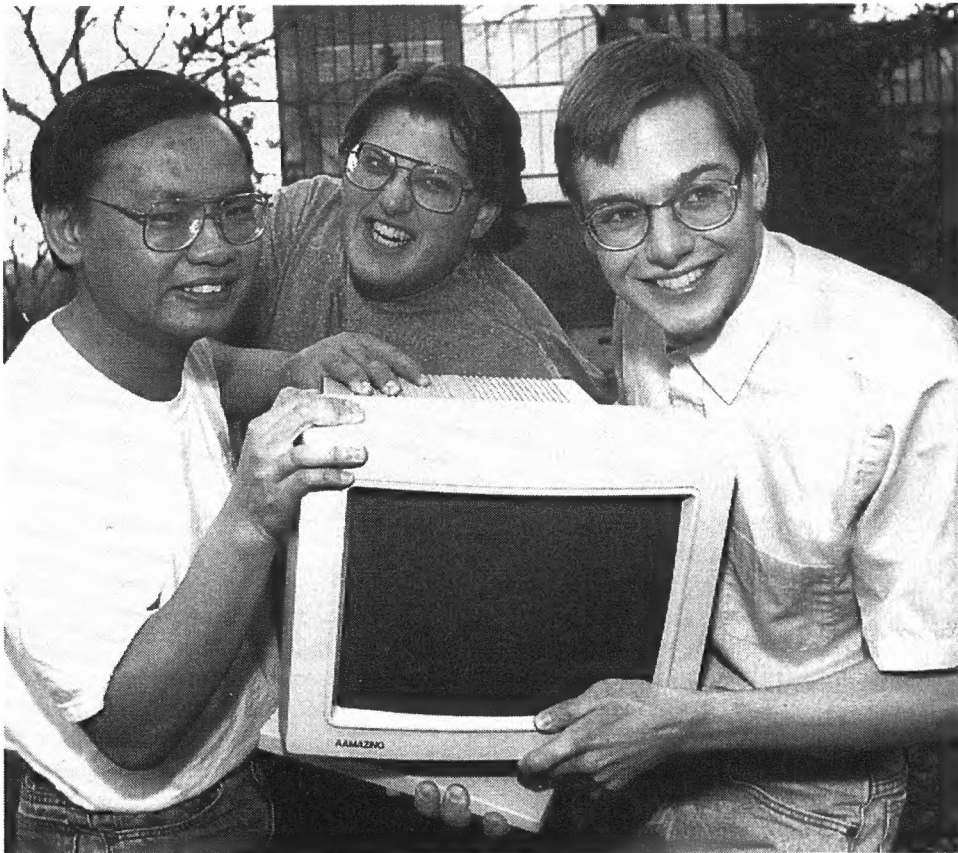
Bannock swears he'll always write the music he feels he must and is disgusted with American rap artists who've gone "commercial" to hike sales and make lots of money. "If I didn't experience it, I wouldn't know what to say. It would basically be full of shit." That's why he turns to "gangsta" rap artists like "Ice-T," "Naughty By Nature" and "Ice Cube" for inspiration because he says he can relate to what they're saying. But not all his music is angry. Bannock's repertoire also includes "My Only Love Song," and several party songs, "for stress release."

It's been two years since his last concert, in Dinwoodie for a Christmas party. He's been busy taking courses and trying to keep his grades up. Ultimately, he hopes one day to open his own drug and alcohol clinic to help other people make changes in their lives.

In the meantime, he continues to write poetry, including tributes in memory of people who have died. Their families ask for his poems. "It's quite an honor," says Bannock. ■

Students take problem-solving to world class level

By Lee Elliott



Howard Cheng, Alan Skelley and Adam Beacham

They took on the world and placed a solid eighth.

Students Howard Cheng, Alan Skelley and Adam Beacham competed against 53 computer programming teams from around the world in the 1998 ACM International Collegiate Programming Contest World Finals in Atlanta, Georgia February 25 and 28.

The only North American teams to edge ahead of them were University of Waterloo and MIT, placing third and fifth respectively.

Team coach Dr. Piotr Rudnicki, associate professor computing science, who accompanied the team to the finals, said, "I was very pleased with them."

Rudnicki led the team through practice simulations before heading to the competition and said their finish, "was slightly better than we expected." Based on their practice record, Rudnicki expected them to solve four problems. They solved five and were into their sixth when they ran out of time.

The real skill in the contest is mathematical, says Rudnicki. "One of our boys (Adam Beacham) is not even in computing science, he's in mathematics." Individual skills are important, he adds, but team "chemistry" is critical. There is only one machine for three contestants. Competitors get eight problems to solve in five hours.

They're warned by judges two of the problems are designed so everybody is expected to tackle them, while two problems are too complex to be solved in the time allotted. "A big skill is knowing what not to tackle," says Rudnicki.

If there's one thing he'd do better going into next year's competition, it would be practice more. "The teams that placed ahead of us, first of all are from much larger universities and secondly, they practice more." Universities like Western Ontario have regularly scheduled practices with large groups and then pick their teams from the best of the pool.

Howard Cheng and Alan Skelley, responding by email, said they placed well within their expectations. The two say their start was slower than expected because, "We ran into some trouble with the first problem that we tried to solve. Our first submission was rejected, and it was finally fixed and accepted."

At one point in the competition, the threesome was sitting in fourth place with five problems solved. "Unfortunately, we ran into a lot of trouble with the sixth problem, and we couldn't solve it in the last hour."

Student Neil Burch accompanied the team as an alternate. ■

Women make inroads in faculty positions

By Lee Elliott

Women have made steady gains in faculty ranks according to the most recent employment equity statistics.

Dr. Anne Marie Decore, associate vice-president (academic), says the percentage of female full professors has risen to 15.2 per cent from 10.7 per cent in 1993. An even greater gain was made in the ranks of assistant professors where 34.9 per cent are now female compared with 26.5 in 1993.

"That's very interesting," says Decore. "You can clearly see the impact of retirements and renewal on the proportions of males and females. Decore says the U of A has always had a fair proportion of males and females in the overall workforce, "It's just that most of them [females] used to be secretaries."

A comparable rise is seen for all academic staff, which includes administrative professional officers and librarians. The proportion of females across all academic staff has increased nearly four per cent since 1993.

While these results are promising, Decore says, "We've still got a good way to go." The numbers of employees who are members of a visible minority or who have a disability have declined slightly. The number of Aboriginal employees has increased only marginally. These are flags for concern, says Decore. Some members of these groups were lost during the cut-backs and privatization of some services. "Those are areas where we've not been hiring again," she says. "But hopefully in our faculty recruitment, we'll be adding

Aboriginal people, persons with disabilities and members of visible minorities. Certainly, that's our intent." ■

Comparisons of the U of A 1997 aggregate workforce with the Canadian 1991 aggregate workforce		
	U of A	Canada
Women	49.4	45.9
Members of visible minorities	11.2	9.1
Aboriginal Peoples	1.3	3.0
Persons with disabilities	2.6	6.5

Virtual Nervous Systems

Computer technology takes over where the body leaves off

By Deborah Johnston



Heidi Janz

Heidi Janz, a 31-year old playwright and author of a yet-unpublished book, is working on her PhD. She has cerebral palsy—and aspirations to become a teacher. Unfortunately, Heidi's speech might be difficult for her future students to understand.

"In face-to-face conversation with people who are at least somewhat familiar with me, it's usually not a major problem. But when I'm talking to someone who doesn't know me at all, or talking to some people on the phone, trying to communicate can become very frustrating," Heidi writes via email.

Heidi's words could easily be understood, however, by a computer programmed to recognize impaired speech.

A project to link voice with new advances in computer technology is just one of several joint research projects between the Glenrose Hospital and the University of Alberta Faculty of Rehabilitation Medicine. Dr. Aleksandar Kostov and research associates Mark Polak and Dr. Fangxin Chen use artificial intelligence and digital signal processing to develop technology that will make life easier for disabled people.

Advanced computer technology, for example, may make it possible for a computer to translate Heidi's speech patterns and repeat them intelligibly—either in a synthesized voice or to appear as words on a computer screen.

Another project links human thought patterns with computer technology. The Brain-Computer Interface Project provides severely disabled people a means to communicate by using their thought patterns to move a cursor on a computer screen.

Researchers have also refined functional electrical stimulation technology—in which paraplegic subjects can activate sensors on their legs by pressing a switch. The sensors send a signal to the leg muscles, provoking a walking reflex. The refined technology uses a computer and sensors installed on the subject's limbs. "The sensors can detect the position of the leg and the load and reproduce the action of the human pressing on the switch," Kostov says.

All this barely taps the potential of using computers to assist the human body, says Kostov. To even approach the limits of technology, he hopes to bring researchers from other disciplines—linguistics, computing science, neuroscience, speech and language pathology, physical and occupational therapy—into the Brain Computer Interface Project. "To really open that untouched field of two-dimensional positioning, we need a bigger team. We need people to specialize."

"We are teaching machines to reproduce examples from the real world," says Kostov. No matter how space age all this sounds, he reminds us, "we are not teaching machines to think." ■

“Just do it!”

Shelley Foster lets nothing stand in her way

By Lucianna Ciccocioppo

If she could bottle, package and market her energy, Shelley Foster would no doubt be a millionaire. Talking to the 25-year-old is like sitting through a cyclone of enthusiasm for her passions in life: work, sports, family and friends.

And it's clear, this hyper-A type individual thrives on achievement and adrenaline. In fact, she's chock full of both.

A former competitive ski racer, now recreational skier and snowboarder, soccer player, track and triathlon athlete, in-line skater, sailor and windsurfer, Foster was the only Canadian MBA student hired for a work placement last year at Nike Incorporated, the worldwide sporting company based in Beaverton, Oregon.

For a sports “Amazon” like Foster, this was the ultimate in internships.

“The corporate culture at Nike is second to none, in terms of leadership and lifestyle,” says Foster. She gushes at the lunch hours spent playing “roller” hockey with colleagues and heading out after an 11-hour workday to join the triathlon team for training.

How many interns do you know who can jog with the CEO of a multinational company at noon?

“Nike is full of a bunch of athletes who didn't quite make it but who still have a passion for it ... and an academic background,” says Foster with a laugh.

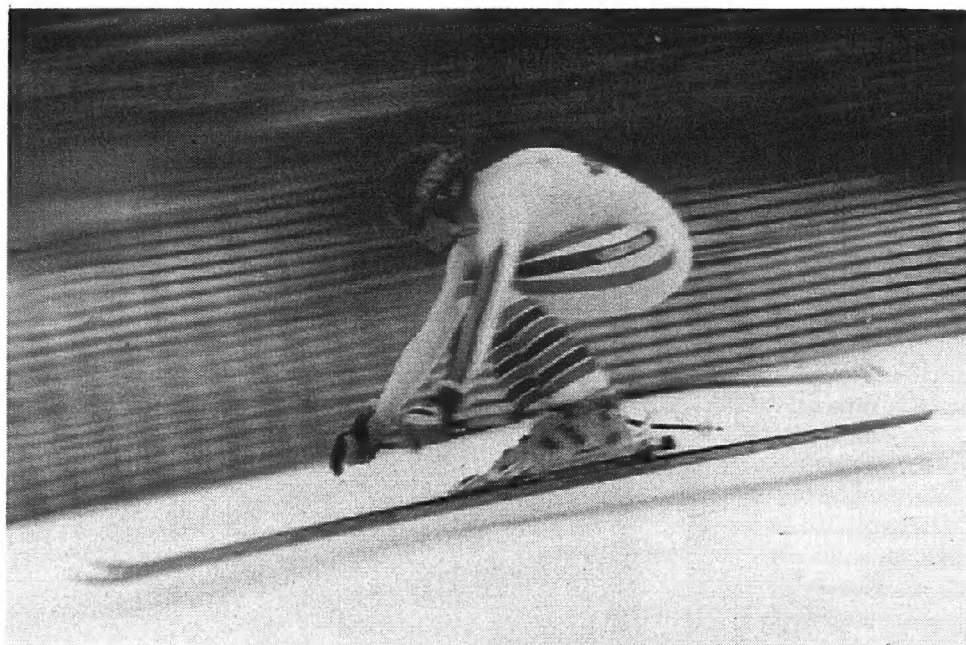
Indeed, the corporate lingo serves to strengthen this image. Foster says Nike headquarters is called the “campus” and it comes complete with the most amazing gym and track she's ever seen.

Only people with “brains and brawn” need apply at Nike Inc. Cellulite? Forget about it. These people are so lean they make skim milk look lumpy.

Tony Dorado, senior human resources advisor at Nike Inc., says 5,000 people responded to their call for applications. The world's biggest “grown-up toy company” then selected 185 MBA interns from across North America for their equipment division.

As a result, Foster hobnobbed for four months with graduate students from Harvard, UCLA, Stanford and Columbia, just to mention a few of the Ivy League institutions represented.

Foster managed her own project, which involved an international marketing analysis for the company she once questioned about worker exploitation in a paper for a course.



Racing in the Canada West Championships, 1994

“But Nike turned out to be the industry leader,” says Foster. The U of A student argues the company sets the standard for other multinational sport companies, like Reebok and Fila to follow.

And despite feeling a tad intimidated as the lone Canuck amid a sea of Ivy Leaguers, her final project presentation catapulted this U of A student firmly on par with those from the Harvards and Stanfords of this world.

Now, she can confidently start job hunting since her course work is complete. She's waiting to hear back from Nike Inc. for employment. “My bosses would want me back,” says Foster, her eyes shining with excitement, “but it depends on their budget.”

Life wasn't always on the go for Foster. At 23, the week she graduated with her bachelor's degree in Latin American history and political science, a skiing accident broke her back. She convalesced for a year and a half. Shelley the ski racer slammed into a tree at 80 kilometres an hour at Lake Louise. “My chiropractor said this would allow everything to heal finally in one

year,” alluding to her other sport injuries.

This was when she decided not to enter medical school or law, dissuaded by her two mentors in life, “my older brothers.” Just guess what they do for a living.

Instead, she opted for a master's in business administration which included an exchange with Vienna University of Economics and Business Administration.

While critics argue MBAs are a dime a dozen, Foster doesn't flinch. “Yeah, but it depends on what you do with it. It helps you market yourself and gives you a certain skill set,” says Foster, who believes, ultimately, it's ambition and personality that will jet-start your career.

In the meantime, don't expect her to be sitting by the phone waiting to hear from Nike Inc. This is Shelley's time to catch up with old friends and new adventures. She's taking singing lessons, writing a book and turning down job offers from Alberta oil and gas, and telecommunications companies. And she is thinking about a possible internship with the Canadian government in Argentina. Just in time for their winter ski season ■



Shelley Foster enjoys Oregon nature

Taking talent to the top

Jenia Tishkina brings her international expertise to the U.N.

By Geoff McMaster

It's a job many of our brightest students only dream about. First get a degree or two under your belt, a couple of languages, some high-profile job experience, and perhaps then, with a good deal of luck, you'll have a shot at hobnobbing with the international community at the United Nations.

U of A business student, Jenia Tishkina, has had more than a good deal of luck, however. Less than a month into her MBA program last fall, she was selected to work at the U.N. as an intern. After a brief training session in Toronto with twenty other interns, she arrived in New York in January to work on a project of no small consequence: combating drought and desertification in Central Asia.

Part of Tishkina's job is to help the five newly independent states in the region formulate programs and develop policy.

“It's very interesting,” she reports via e-mail. “My position is considered different from other interns in the office. It's considered to be at a professional level,

and therefore I am doing a ‘real’ job, not filing or something similar to that, and it's aiming to help us find a proper professional job in the near future. Obviously, I am happy about it.”

“It's never

boring here,”

she says. “New

York City is the

most wonderful

city I've ever

been to—and

I have traveled

quite a bit.

Soon after arriving in Canada, Tishkina landed a job as a financial analyst with Proctor and Gamble in England, then re-

Tishkina may be only

25, but she's already had more experience of the world than most people her age. Russian in origin, she received her economics degree from the University of Kiev in 1995 and immigrated to Canada with her family that same year.

“The ecological situation in Ukraine was bad after Chernobyl, and my mom and dad wanted to try something new and explore new possibilities.”

turned to Canada to work part time with the Hongkong Bank of Canada before deciding to go back to school last year. She cites “working in different countries in a multicultural environment” as the quality that made her shine in the internship competition. That and her background in Russian language and culture.

“Since all the countries I am working for are former republics of the USSR, Russian is considered to be a business language and everybody knows it. I also used to live in the USSR, and so I know local conditions and can kind of feel the way people think and work there.”

By the time Tishkina finishes her internship in July, she hopes to have written a report on her experience that will count towards her degree. She has an eye on a career in financial consulting, but senses a position at the UN beyond her internship may also be within reach.

“As I can see, there are a lot of (internal) vacancies being advertised right now. But even though I might have an advantage as an insider, I still will have

to go through the normal recruitment process.”

While life at the U.N. may be an exhilarating challenge, it isn't all hard work, says Tishkina. One of her closest friends lives in New York and she's also met a few Russians. Finding things to do in her spare time is hardly a problem, since she is, after all, living in one of the most exciting cities in the world. She shares a residence with other young women in one of Manhattan's hippest quarters, near Chelsea, Soho and Greenwich Village.

“It's never boring here,” she says. “New York City is the most wonderful city I've ever been to—and I have traveled quite a bit. My budget is very tight, that's why I am trying to look for free or cheap events. UN employees have free access to museums, and so I am using this opportunity quite often.”

Fortunately, her meals are included in her rent—one less thing to worry about in her busy urban life.

“Which is just excellent for me,” she says, “since I am not a good cook at all.” ■

1998 Sports Wall of Fame

Four to be honored April 2 at the thirteenth annual sports dinner



Gordon W. Bertie, B Sc '72, B Ed '74

Although small in physical stature, Gordon Bertie was a "giant" in inter-university wrestling from 1969 to 1975.

Within this time frame, he won three freestyle CIAU championships, five Canadian national championships, and one Canadian national Greco Roman championship.

Bertie has represented Canada well in this premiere sport: two Olympic Games (1972 and 1976), two Pan American Games teams, the 1974 Commonwealth Games team, four World Wrestling Championships, three World Cups, and the 1993 and 1995 World Masters Championships (where he won gold and silver respectively).

An impressive aspect of Bertie's career is that he succeeded, even thrived, in the best wrestling competitions in the world.

In 1971, 1974, and 1975, he competed in Free Style, winning a bronze medal in 1974, the first ever World Wrestling Championship medallist for Canada.

Few other Canadian wrestlers, in any weight class, have achieved his high standard of athletic performance.



Donna (Huestis) Enger, BPE '59

The athletic achievements of Donna (Huestis) Enger are remarkable. She was an outstanding two-sport athlete in the Pandas program and was a builder of athletic programs at the University of Alberta, in the community, and in the school system of Edmonton.

In 1956, Enger enrolled in physical education and until 1960, was a starter on both the Pandas volleyball and basketball teams.

These teams captured WCIAU championships in 1958, 1959, and 1960. Enger was crowned top female gymnast at the 1959 intra campus competition.

From 1961 to 1965, Enger was a member of the Faculty of Physical Education and accepted the challenge of building a competitive women's gymnastics program on campus.

This program has been one of the strongest gymnastics programs in Canada since its inception. Enger went on to build physical education and athletic programs within the Edmonton Public School system. In 1988, she received the CAHPER Service Award for her outstanding contributions to the field of physical education.

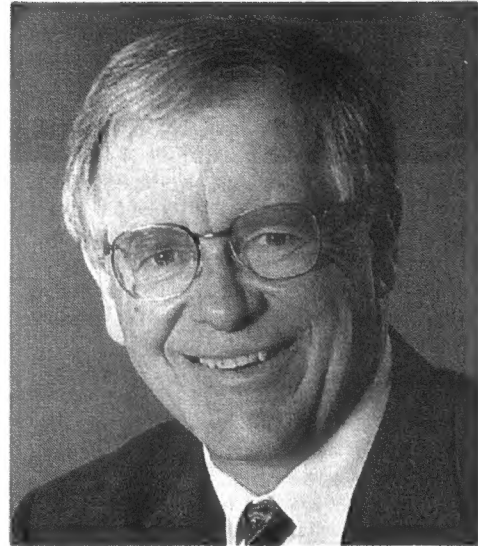


Gino Fracas, BEd '58

Great athletic programs do not simply happen; they are created, nurtured and built by dedicated, capable, and committed leaders. Gino Fracas is one of the outstanding builders of Green and Gold athletic programs.

As an athlete, Fracas played for the Edmonton Eskimos (1955 to 1962) winning two Grey Cups. He joined the Faculty of Physical Education in 1960 to build the intramural program and to coach the Golden Bears inter-university wrestling team. Under his guidance, the team won two WCIAA championships. Following his retirement from the Eskimos, Fracas was named head coach of the Golden Bears football team. Between 1963 and 1966, the team won three of four WCIAA championships as well as the 1963 Golden Bowl. Fracas' Golden Bears played the University of Toronto in the first official College Bowl in 1965, dropping a close 14-7 verdict.

In 1968, Fracas went home to the University of Windsor where he coached the Football Lancers for 19 years, winning CCIFC and OUAA championships along the way. In 1988, Football Canada established the Gino Fracas Award in his honor.



Dick Wintermute, BPE '63, B Ed '65

Dick Wintermute was a truly great athlete and a superb team player. During his 11 years at the U of A as a student athlete and as an assistant coach, he was a member of three CIAU national championship teams (two hockey; one football) and 11 Canada West championship teams (seven hockey; four football). A stand out, two-sport star, he played five seasons on the blueline for the Golden Bears hockey team (1960-61 to 1964-65) and three seasons as an offensive centre for the football team (1962 to 1964).

In hockey, he was named to the 1963-64 CIAU University Cup All-Tournament team and to the Canada West first All-Star team in 1961-62 and 1963-64; and the second All-Star team in 1962-63 and 1964-65. The Western Canadian Intercollegiate Football League named Wintermute to their All-Star team in 1963 and 1964. In 1963-64, he was co-winner of the Wilson Challenge Trophy.

Wintermute served as an assistant coach of the Golden Bears hockey team from 1969/70 to 1974/75. He also coached minor hockey, served as assistant coach of the 1965 Edmonton Huskies and was head coach of a local high school football team for ten seasons.

"Movies" of deadly heart irregularity may lead to new controls

U of A's Dr. Francis Witkowski pioneers high-resolution image system to witness ventricular fibrillation

By John Toon and Lucianna Ciccocioppo

Ventricular fibrillation kills thousands of North Americans each week by inducing abnormal electrical signals that turn their hearts into quivering "bags of worms" no longer able to pump blood. Victims die within minutes unless the erratic heart rhythms can be halted with massive jolts of electricity from a defibrillator.

Medical researchers have now moved one step closer to understanding the causes of ventricular fibrillation through a remarkable series of high-resolution movies that clearly show how the condition disrupts the electrical signals normally governing the heart. The unique high-speed imaging system produced for the research also revealed, for the first time, ventricular fibrillation may develop in two distinct phases.

"The electro-physiology of the heart evolves in time as ventricular fibrillation develops, and that has implications for how we attempt to control it," said Dr. Francis X. Witkowski, the study's lead author. Witkowski is a professor in the U of A's Faculty of Medicine and Oral Health Sciences and a medical scientist of the Alberta Heritage Foundation for Medical Research.

"The initial form, which occurs in the first several seconds of ventricular fibrillation, is a different entity from what develops over time." Medical researchers have long known that the longer the fibrillation episode lasts, the more difficult it is to stop. They had blamed that on declining blood

flow in a fibrillating heart, but Witkowski says the newly-discovered two-phase pattern suggests the explanation may be more complicated.

The unique imaging system used by the international research team from Canada and the United States produces detailed information from as many as 16,000 points on a portion of the exterior surface of the heart. Operating at 838 frames per second, the system allows researchers to capture the rapid and disorganized waveforms for analysis.

The system relies on fluorescent dyes responding to electrical changes in the cells of the heart muscle. Researchers expose the beating heart to high-intensity lights, then image and intensify specific wavelengths of light returned by the dyes. Pioneered by Witkowski, who is also trained as an electrical engineer, the system produces images with improved resolution compared to earlier techniques.

"We have now seen the smoking gun of fibrillation," said Dr. William L. Ditto, professor of physics at the Georgia Institute of Technology and one of the study's co-authors. "We now have evidence of what is going on. This dramatically increases the possibility that we could develop a new defibrillator or improve existing defibrillators."

The movies reveal a series of unusual spiral waves that originate with "rotors"

near the surface of the heart. The waves rapidly expand, flow across the heart muscle, merge and even interfere with each other, causing heart cells to contract in an uncoordinated way.

Knowing how these unique waves form and behave could provide the information needed to design and test control techniques that may provide an alternative to existing defibrillators - which deliver the electrical equivalent of "a bowling ball dropped onto your chest from a two-story building."

Because the spiral waves seem chaotic in their behavior, researchers hope they can apply newly discovered chaos control techniques to restore normal heartbeat. Instead of the massive jolt of electricity, the chaos control technique might bring the heart back into normal rhythm using carefully applied electrical signals of much less energy.

"The idea behind chaos control is that very small changes to a truly chaotic system dramatically change its behavior," Ditto explained. Reducing the amount of energy could also allow defibrillators, both portable devices used by emergency medical teams and the implantable devices put into chests of people vulnerable to fibrillation, to be smaller and operate longer on their batteries.

The next step in the work is to try out chaos control techniques, using the imaging system to observe the effects. Once

they find promising techniques, the researchers would hope to try them on surgery patients whose hearts go into fibrillation on the operating table. The technique could also have application to atrial fibrillation, a less-serious disruption of the heart's atrium.

The stakes are high, notes Witkowski, who as a practicing cardiologist regularly sees the consequences of sudden cardiac death caused by ventricular fibrillation.

"Sudden cardiac death kills more Americans than anything else," he said. "The median age is 59, so these are not people who are very old. This often happens with people who are suffering a first heart attack from which they could have recovered."

Sponsors for the work include the U.S. Office of Naval Research, the National Science Foundation, the Medical Research Council of Canada, and the Alberta Heritage Foundation for Medical Research.

Besides the researchers mentioned, the team also included L. Joshua Leon of the École Polytechnique in Montreal, Patricia A. Penkoske from the University of Alberta, Wayne R. Giles from the University of Calgary, Mark L. Spano from the Naval Surface

Warfare Center, and Arthur T. Winfree of the University of Arizona.

Details of the work appear in the March 5 issue of the journal *Nature*. ■

RETIREMENT PLANNING SEMINAR FOR ACADEMIC STAFF

APRIL 20-21 1998

The Office of the Vice-President (Academic) and the Association of Academic Staff of the University of Alberta (AAS:UA) invite members of the AAS:UA and their spouses to attend a two-day retirement planning seminar. The seminar will provide participants with an opportunity to: identify and address any immediate issues with respect to retirement plans; develop a strategy for planning long-term goals; and provide specific information in the areas of lifestyle, financial and estate planning.

April 20, 21; 8:30 a.m. - 4:30 p.m.

The seminar will be held in the Banquet Room, Lister Hall. There is no charge; coffee and lunches will be provided.

Enrollment is limited and will be on a first-come, first-served basis, however, priority will be given to new attendees. If you are interested in attending, please call Kathy Van Denderen at 492-5321 or e-mail: kathy.vandend@ualberta.ca. You may also register on the AAS:UA homepage on the internet: www.ualberta.ca/~aasua. Deadline for registration is March 23, 1998.

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Menopause and Beyond

March 14, 9:30 am-1 pm
Bernard Snell Hall
University of Alberta Hospital

Knowledge is often the best medicine for good health. Attend this half-day menopause seminar involving professionals in conventional and complementary medicine. Menopause and post-menopausal health issues will be examined along with various treatment strategies ranging from hormone therapy to herbal remedies.

Speakers include: Dr. Elaine Jolly, MD; Linda Kodnar, Naturopathic Doctor; and Pauline Leung, Qigong instructor. Cost for the session is \$10. To pre-register call 492-3093.



Faculty of Extension
University of Alberta

A win-win way to give

Nursing Professor Emeritus Peggy-Anne Field finds innovative way to donate

By Michael Robb



Professor Emeritus Dr. Peggy-Anne Field

Michael Robb

other donors Field has decided to use the deferred giving route. She's taken out life insurance. She pays the premiums—the U of A is the beneficiary.

"It helps me with my taxes and in the long run it gives more to the university than I could ever give personally," says Field, who is also heading up the faculty's effort to encourage alumni to give to the Campaign. "I'm responsible for contacting alumni, raising our profile among the alumni community and identifying donors."

Field says the faculty has made the transformation from a strictly professional faculty to a scholarly faculty, one that now has strong graduate programs and professors who have substantial and important research programs. This transformation took place first with the introduction of the master's program in the mid-1970s. "Up until then, there wasn't a great deal of sustainable research going on; I suddenly found a whole new world I could incorporate in the my classroom teaching." Then the PhD program was approved in the mid-1980s, firmly establishing the faculty as one of the country's research-intensive nursing faculties.

Supporting this research is now a major challenge. Field says internal research funding can't meet all the needs, hence the

need to attract outside funding. "You can't sustain excellence by relying solely on government," says Field, and providing scholarship support is critically important. Attracting the best students who will work with leading scholars is one of the faculty's most important goals.

Field, who began her career in 1964 at the U of A, retired in 1995, but she didn't stop working. Along with her Campaign responsibilities, she's still advising students, giving the occasional class and conducting seminars. Off campus, she's participating in accreditation visits for the Canadian Association of Schools of Nursing. And locally, she's volunteering with the Muttart Conservatory's children's program.

Field has also found her wings, recently travelling to Egypt, Alaska and Australia. She's taken courses in Greek mythology and the history and culture of the Vikings. And she's bird watched in Kananaskis Country. The new balance she's struck suits her just fine.

She has few regrets. The Faculty of Nursing has been a wonderful academic home. She believes, however, she was a generation too early. "I would like to have been a top-notch researcher," says Field, whose primary contributions were in the classroom, in the profession and in advocacy roles. ■

UNIVERSITY OF ALBERTA CAMPAIGN

Nursing aims at World Health Organization designation

Plan designed to increase international collaboration

By Michael Robb

The World Health Organization is watching.

In fact, an official was on campus last week to do a little investigative research, meeting with many of the Faculty of Nursing's top researchers. The faculty is working with the World Health Organization (WHO) on a proposal to designate a WHO Collaborating Centre in Mental Health and Nursing at the University of Alberta. The designation would be prestigious. Only a few others exist in Canada—McMaster University and Mount Sinai Hospital in Toronto, for example.

According to the Pan American Health Organization regional adviser in nursing education, Maricel Manfredi, the faculty has a good chance of earning the coveted designation. "This is a strong research school...this is a university well known outside of Canada."

Researchers in the faculty don't expect a huge injection of research funding as a result of the designation. Instead, they see more opportunities to work with colleagues around the world, more opportunities for students to study abroad and



Maricel Manfredi, regional adviser in nursing education for the Pan American Health Organization, a closely affiliated organization with the World Health Organization

more recognition for the international work they do.

"This fits nicely with our strategy for internationalization," says nursing profes-

sor Dr. Linda Ogilvie. "Our research networks would expand, our access to sources of research funding would improve and we would be able to attract more international students." And says nursing professor Karen Mills, interdisciplinary work would also be expanded, appropriate given so many health issues have to be tackled in a multidisciplinary fashion.

The proposal will be forwarded to Health Canada, which in turn will forward it on to the Washington-based organization. Normally, the process takes about two years, but it's possible it will take as little as a year, given the kind of work the faculty has done, says Manfredi.

Receiving the designation as a collaborating centre is a natural progression for the faculty. Many professors have firmly established links and projects internationally and the faculty has steadily built intensive research activity. About a decade ago, it had no funding for a PhD program and a few special students. Now it has 45 PhD students active in research and a funded program. ■

There's no place like home

U of A students and professor return from tornado-struck Florida

By Lucianna Ciccocioppo



The ecosystem and wildlife biodiversity study trip (ENCS 465) has been going on for five years. Over the last two years, Dr. Jim Butler, Department of Renewable Resources, has taken students to the Galapagos Islands and Amazon jungle. This year, students explored Florida's diverse habitats by foot, boat and van, visiting Ding Darling Refuge for bird watching, Corkscrew Swamp Sanctuary and Everglades National Park for flora and fauna studies.

When Dr. Jim Butler took his students down to Florida for his annual ecosystem and wildlife biodiversity study trip, he never expected it to turn into a lesson in the force and fury of nature.

But by one a.m. the morning of February 21, the professor of wildlife and conservation biology knew the torrential tornado beating down in Osceola County was something big. Bigger even than Edmonton's "Black Friday."

Butler and the students told their stories to local media the day after they returned from being stranded three days in Salt Lake City, Utah. They were stuck there because of snowstorms.

It was as if the "weather demons" of El Niño were following the U of A group across the continent.

But it was the Florida experience everyone turned out to hear.

It was the last day of their trip, said Butler, who set the scene in the hushed Alumni Room in SUB. Twenty-three students participated in a course that included swimming with manatees, searching for amphibians, walking the path of the Florida panther, snorkeling the coral reefs and watching some of the most incredible birds in the world.

Early that morning, some students were still up, mesmerized by the scenes flashing across the television sets in their hotel rooms. Tornado warnings were blaring from the local channels. Chris Fischer, a graduate student in conservation biology, described the downpour as a "solid wall of white. It was impenetrable."

By five a.m., the impact of the devastation was sinking in, explained Butler. Hospitals were full and emergency services overwhelmed. The "Canucks" knew they had to do something.

"Many students have advanced first aid training. So we phoned in to help," said Butler. "You could hear the person on the other line had tears in her eyes when she heard a group of Canadians wanted to help."

But given the efficient network of help available from around the state, Butler says their offer of aid was turned down.

Television news reports soon started calling for blood donations.

"They said the hospitals ran out of blood in one hour," said Butler. The students decided to go as a group. They were among the first to arrive. And by the time they started trickling out, there was a line-up of Americans waiting to donate.

"As we were leaving, we could hear the Americans whispering down the line, 'The Canadians ... Canadians,'" said Chris Fischer. Apparently, good news travels quickly. Anne-Marie Buchwald says the appreciation of Floridians was even more outspoken out on the streets, as many waved, cheered and honked their car horns, when they saw the U of A students.

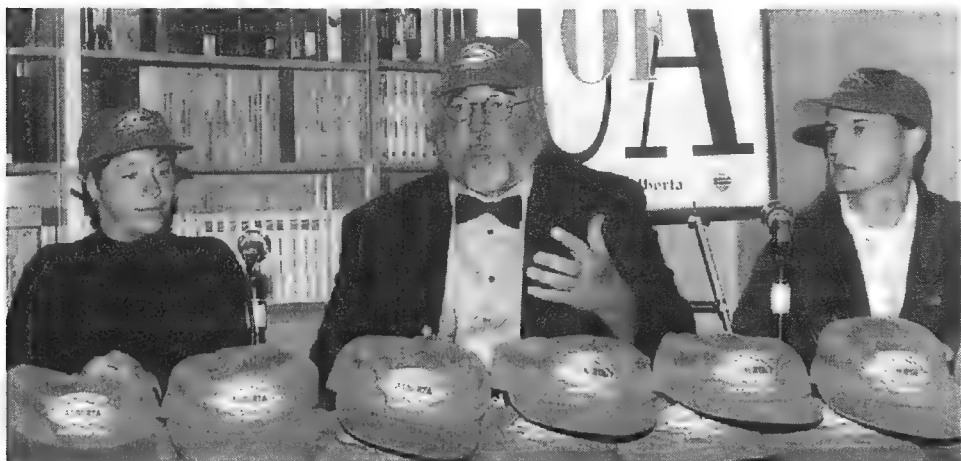
Butler says there were other tornadoes during the trip, including one which touched down the previous week when the class was in Fort Myers, and one hit Sanibel Island 45 minutes after they left. Tanya Sprague said that was the scariest moment for her because "we didn't really realize what was going on at the time."

For 71-year-old student Rae Ehrman, "The whole experience was extremely meaningful in so many ways, from the tragedies we witnessed to the adjustments we had to make. We never really feared for our own safety," said Ehrman. "By the time we found out all the gory details, it had passed."

In fact, Professor Butler said the whole gang was focused on the situation at hand and what they could do to help. "I never saw tears of fear in our group." What he saw instead were the bonds they felt with people who had lost loved ones.

Despite the outpouring of gratitude from Americans, the academic instructor turned "surrogate father" to 23 remained unfazed with the Canadian eagerness to help. "These people are in the service field, not only to the environment but to humans as well," he said matter-of-factly.

Dr. Doug O'wram, vice-president academic, thanked Professor Butler and the students on behalf of the university and gave them U of A baseball caps, courtesy of the Bookstore, in appreciation of their aid efforts. ■



Anne-Marie Buchwald, Dr. Jim Butler, Chris Fischer tell their stories at a news conference at the U of A

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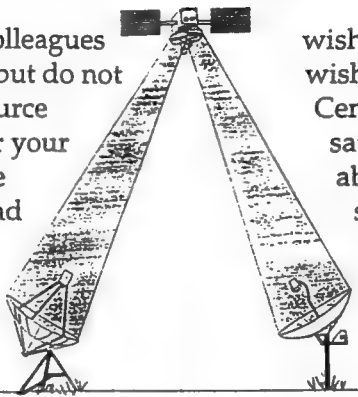
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External Affairs takes gold, grand gold, crystal ...

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By Lee Elliott

U of A Director of Public Affairs Tony Myers took the podium February 22 at the District VIII Council for the Advancement of Education (CASE) awards in Seattle to receive the district's highest honor—The Virginia Carter Smith Grand Crystal Award for the U of A Campaign launch.

CASE is an organization of fund raising and communications professionals from post-secondary institutions throughout Western Canada and the Northwest United States.

According to Myers, "The judges said following the presentation, that the deciding factor in awarding the crystal award to the U of A Campaign Launch was the total team involvement in making it a success." In his speech to the more than 300 delegates, Myers thanked Dr. Martha Piper, former vice-president, research and external affairs, Dr. Terry Flannigan, associate vice-president external affairs—and a cast of hundreds. "The launch was a success only because of the outstanding contributions made by the committee chairs," says Myers. "That and the advice and counsel of the other members of the committee and the outstanding support of close to 250 volunteers."

The U of A 1997 Annual Report to the Community by Michael Robb was also in the running for the Crystal Award. It won the Grand Gold in the Annual Report Category. The district's top award for up and coming professionals—the Rising Star Award—went to Lara Minja, U of A Graphic Design and Photography Services. This the second year in a row the U of A walked away with the Crystal Award. Last year designer Lara Minja won Crystal for the Patents Portrait publication.

The U of A won numerous other awards at the ceremony:

Newsletters

GOLD

Michael Robb, University Campaign News

Overall publication design

GOLD

Lara Minja, U of A desk calendar

GOLD

Lara Minja, U of A 90th Anniversary Wall Calendar

SILVER

Faculty of Engineering, Engineering Case Statement

SILVER

Raymond Au, Lara Minja, Dennis Weber, Tina Chang, Folio

BRONZE

Dennis Weber, Bio-diversity Grants Program

BRONZE

Lara Minja, Explore our Universe of Learning

BRONZE

Lara Minja, Department of Drama student recruitment package

Photo essay or stories

BRONZE

Sima Khorrami, 25 Years of Life at the Hub (New Trail)

BRONZE

Faculty of Engineering, Engineering Case Statement (Bluefish Studios)

Alumni relations project

BRONZE

Susan Peirce, Alumni House

WWW sites

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Rob Lake, Folio

talks

Submit talks to Tamie Heisler by 9 a.m. one week prior to publication. Fax 492-2997 or e-mail at public.affairs@ualberta.ca.

ANTARCTICA AND GOUGH ISLAND SLIDE SHOW

March 10, 5 p.m.

Experience the stunning scenery and wildlife of Antarctica and Gough Island in the South Atlantic (recently declared a world heritage site). The show extensively documents two summer trips to Antarctica and a 12-month expedition to Gough Island, as well as rare slides of Tristan da Cunha and Bouvetoya Islands. 3-27 Earth Sciences Building.

ART AND DESIGN

March 9, 5 p.m.

Christopher Frayling, Rector, Royal College of Art, "The Head, the Heart and the Hand—The Tragical-Comical-Historical Story of Design Education and the Need for a New Convergence." Timms Centre for the Arts.

BIOLOGICAL SCIENCES

March 11, noon

Axel Moehrensclager, Wildlife Conservation Research Unit, Oxford University, "Can the Wily Coyote be Out-Foxed: Lessons from Swiftfoxes in Canada and Mexico." B-121 Biological Sciences Centre.

ECOLOGY SEMINAR SERIES

March 13, noon

Karen Harper, "Vegetation Structure Along the Lakeshore Forest Ecotone: Research on the Edge." M-229 Biological Sciences Centre.

March 20, noon

Sylvie Mauser, "An Ecological Ranking System for the Peatlands of Boreal Alberta—A Step Towards

'Good' Peatland Management." M-229 Biological Sciences Centre.

MOLECULAR BIOLOGY AND GENETICS RESEARCH GROUP

March 6, 4 p.m.

Douglas Muench, Biological Sciences, University of Calgary, "What Way to the ER? mRNA Localization in Rice Endosperm." G-116 Biological Sciences Centre.

March 9, 4 p.m.

Myron Goodman, Biological Sciences, University of Southern California, "The Biochemical Basis of DNA Replication Fidelity." M-145 Biological Sciences Centre.

March 13, 4 p.m.

John Gearhart, Gynecology and Obstetrics, Johns Hopkins University, Baltimore, Maryland, "Embryonic Stem Cell Lines Derived From Human Primordial Germ Cells." Sponsored by the Alberta Heritage Foundation for Medical Research. M-145 Biological Sciences Centre.

March 20, 4 p.m.

Tom Fox, Genetics and Development, Cornell University, Ithaca, New York, "Mitochondrial Expression of Recoded Nuclear Genes: Regulation and Protein Targeting." Sponsored by the Alberta Heritage Foundation for Medical Research. M-145 Biological Sciences Building.

BUSINESS

Mini-Conference

March 10, 10 to 11:15 a.m.

Denis Lawrence, Tasman Asia Pacific, Australia, "The Role of International Benchmarking in Infrastructure Reform: Lessons from Australia." Stollery Centre, Business Building.

March 10, 11:30 a.m. to 12:30 p.m.

Panel discussion chaired by Mike Percy, Dean. Panel members: Denis Lawrence, Tasman Asia Pacific;

Peter Valentine, Auditor General of Alberta; Ging Wong, Human Resources Development Canada. Stollery Centre, Business Building.
12:30 to 2 p.m.
Buffet luncheon. If you intend to stay for the luncheon, please RSVP by March 9 to Louise Hebert (492-5429 or fax 492-9924).

CANADIAN INSTITUTE OF UKRAINIAN STUDIES

March 16, 3:30 p.m.
Volodymyr Mesentsev, Pontifical Institute of Mediaeval Studies, "Kyivan Masonry Construction Under Princess Ol'ha and Prince Volodymyr the Great: Recent Findings." 352 Athabasca Hall.

CENTRE FOR GERONTOLOGY

March 23, 7:30 p.m.
Bonnie Dobbs, Department of Psychology, "Consequences of De-licensing Elderly Drivers." 2-07 Corbett Hall.

CENTRE FOR RESEARCH FOR TEACHER EDUCATION AND DEVELOPMENT

March 10, 12:30 p.m.
Gunther Kress, London University, Institute of Education, "The Question of Literacy in the Postmodern Age." 633 Education South.
March 17, 12:30 p.m.
Judith Campbell, "Health Education and Teaching." 633 Education South.

CENTRE FOR RESEARCH IN CHILD DEVELOPMENT

March 20, 1 p.m.
Fay Warnock, "Infant Pain: Issues Confronting Knowledge Advancement and Optimal Treatment." P-218 Biological Sciences Centre.

CHEMISTRY

March 9, 2 p.m.
David J. Merkler, Department of Chemistry and Biochemistry, Duquesne University, Pittsburgh, Pennsylvania, "The Role of Peptidylglycine Amidating Monooxygenase in The Biosynthesis of Amidated Peptides, Amidated Fatty Acids, and Amidated Bile Acids." E3-25 Chemistry Building.

COMPUTING SCIENCE

March 9, 3:30 p.m.
Lenhart K. Schubert, Professor of the Computer Science department, University of Rochester, "Speeding Up Planners." 112 V-Wing.

CONSORTIUM FOR MIDDLE EASTERN AND AFRICAN STUDIES

Aijaz Ahmad, Professorial Fellow, Centre of Contemporary Studies, Nehru Memorial Museum and Library, New Delhi, will present the following talks:
March 9, 4 p.m.
"Postcolonialism and Empire." TL-11 Tory Lecture Theatre.
March 12, 7 p.m.
"Sectarianism, Secularism and the Future of India." 6-212 Grant MacEwan City Centre Campus.
March 13, 7 p.m.
Reception followed by "Nationalisms: Between History and Discourse" at 8 p.m. Faculty Club.
March 14, 8:30 a.m. to 4:30 p.m.
"Roundtable Discussion: Nationalism and Identity." 1-10 Business Building.
March 16, 4 p.m.
"The Culture of Postcoloniality." TL-11 Tory Lecture Theatre.

ENGLISH

Ross Leckie, poet, editor and teacher, will give a public reading. L-3 Humanities Centre.

ENVIRONMENTAL RESEARCH AND STUDIES CENTRE

March 10, 4 p.m.
Jim Butler and Connie Bresnahan, "Travels of John Muir in the Canadian Wilderness." L-1 Humanities Centre.
March 11, 8 p.m.
Lee Stetson, "Evening with John Muir: Conversation with a Tramp." L-1 Humanities Centre.
March 12, 8 p.m.
Lee Stetson, "Evening with John Muir: Conversation with a Tramp." L-1 Humanities Centre.

NURSING

March 13, noon
Joanne Olson and Margaret Clark, "Interdisciplinary Teaching." 6-102 Clinical Sciences Building.

PERINATAL RESEARCH CENTRE

March 17, 4 p.m.
Steve Harvey, "Growth Hormone and Embryonic and Fetal Development." 207 Heritage Medical Research Centre.

PHILOSOPHY

March 6, 3:30 p.m.
Nick Griffin, Department of Philosophy, McMaster University, "Dummett on Analytic Philosophy." L-2 Humanities Centre.
March 13, 3:30 p.m.
Cressida Heyes, Department of Philosophy, Michigan State University, "What Do Feminists Need in a Theory of Power?" 4-29 Humanities Centre.

PHYSICS

March 6, 2 p.m.
Jurgen P. Franck, "Isotope Studies of Colossal Magneto-Resistance Compounds." V-129 V-Wing.
March 11, 4 p.m.

David Hobill, Department of Physics and Astronomy, University of Calgary, "When Black Holes Collide." V-129 V-Wing.

March 12, 2 p.m.
Jozef Straus, President and CEO, JDS FITEL Inc., "From Schrodinger's Cat to Shredding the Cat (from Science to Business)." V-129 V-Wing.

March 13, 2 p.m.
H.J. Kreuzer, Dalhousie University, "Surfaces and Interfaces: Scientific Mysteries and Technological Miracles." V-129 V-Wing.

POLITICAL SCIENCE

March 11, 7 p.m.
Sunera Thobani, "Selling Women Short: How the Canadian Government is Undermining Women Globally." TBW-2 Tory Breezeway.
March 19, 3:30 p.m.
Ian Urquhart, "Environmentalism: The Limits to Growth in the 21st Century." 10-4 Tory Building.

PUBLIC HEALTH SCIENCES

March 11, noon
Steve Hudey, "Risk of Death in Canada: What We Know and How We Know It." 2F1.04 Mackenzie Health Sciences Centre.

RENEWABLE RESOURCES

March 12, 12:30 p.m.
Fiona Schmiegelow, "Cross-Scale Issues in Ecology and Management: Reducing Liabilities and Leaps of Faith." 2-36 Earth Sciences Building.
March 19, 12:30 p.m.
Stephen J. Pyne, Professor and Environmental Historian, Arizona State University, Tempe, Arizona, "Landscapes Forged in Fire." 2-36 Earth Sciences Building.

RURAL ECONOMY

March 18, 3:15 p.m.
Kay Muir Leresche, University of Zimbabwe, "Wildlife as a Sustainable Land Use Option for Africa." 550 General Services Building.

SECONDARY EDUCATION

Gunther Kress, Chair of Culture Communication and Societies, London Institute of Education, University of London, will give the following talks:
March 7, 8:30 a.m. to 5 p.m.
"Rethinking Paths to Literacy", Symposium
"Spliced Worlds: Literacy, Media Technologies and Teacher's Work in Alberta Schools." 10th Floor, Education South.
March 9, 11:30 a.m. to 1 p.m.
"The Question of Literacy in Schools," The Curriculum and Pedagogy Institute. 122 Education South.
March 10, 12:30 to 2 p.m.
"Research into Literacy: The Question of Literacy in the Postmodern Age," Centre for Research for Teacher Education and Development. 633 Education South.
March 11, 4 to 5:30 p.m.
"The Revolution in the Landscape of Communication: Literacy for the 21st Century," Town and Gown. 2-115 Education North. Wine and cheese to follow.

UNIVERSITY TEACHING SERVICES

March 9, 3 p.m.
Cathy Bell, Waly Dixon, and Colleen Skidmore, "I'm New and I'm Unsure About...I'd Like to Talk With Other New Professors." 219 CAB.
March 10, 3:30 p.m.
Katy Campbell, "Gender and Technology." 2-111 Education North.
March 11, 3 p.m.
Vic Adamowicz, "Teaching Dossiers: Is Someone Going to Read All of This?" 281 CAB.
March 12, 12:30 p.m.
Bev Mitchell, "Adobe Acrobat and the Busy Professor." TL-12 Tory Lecture Theatre.
March 12, 3:30 p.m.
Graham Fishburne, "Another Five Things to Remember When Planning to Teach: Part II." 281 CAB.
March 15, 3 p.m.
Marg Iveson, "Designing and Marking Assignments." TBW-2 Tory Breezeway.
March 17, 3:30 p.m.
Joseph Buijs and Michael Roeder, "Mid-Career and Mid-Life: Issues and Challenges." 219 CAB.
March 18, 3:30 p.m.
Catherine Bell, Joan Greer, Naomi Krogman, Sandra Niessen, and Henry Pabst, "Sustainability and Curriculum Development: Methods and Issues." TBW-2 Tory Breezeway.
March 19, 3:30 p.m.
Marianne Doherty-Poirier, "Organizing Course Content." 281 CAB.

WOMEN'S PROGRAM, EXTENSION

March 14, 9:30 a.m. to 1 p.m.
Elaine Jolly, active researcher on menopause, osteoporosis and hormone replacement therapy, teacher in Continuing Medical Education on Mature Women's Health; Linda Kodnar, Naturopathic doctor; Pauline Leung, Qigong instructor. Health Seminar—"Taking Control of Your Health: Menopause and Beyond." Admission: \$10 at door. Call 492-3093 to pre-register. Bernard Snell Hall, Mackenzie Health Sciences Centre.

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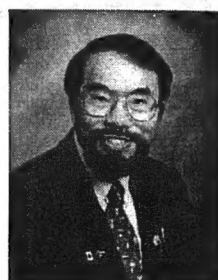
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Alberta Labour is reviewing the Employment Standards Regulation as part of the Government's commitment to efficiency and effectiveness. This Employment Standards Regulation allows for special provisions and exemptions from Alberta's Employment Standards Code. The Employment Standards Code establishes the minimum rights and obligations of the employers and employees in Alberta.

What is being reviewed and How ?

- Minimum wage (\$5.00 and \$4.50 for under 18)
- Conditions of employment of persons under 18 years.
- Fees & costs charged for special services
- Exemptions from the Code's basic minimum standards for: Managers, supervisors, many professional workers, domestics, some salespersons, and film and video extras.
- Special Provisions that apply to a number of industry sectors, including: Oilwell servicing, Ambulance drivers and attendants, Field services (Catering, Geophysical exploration, Land surveying, Logging and lumbering, and some occupations within Municipalities), Highway, Railway construction and Brush clearing, Construction, Irrigation districts, Nursery industry, Taxi cab industry and Trucking industry.
- The review process will involve Public consultation with the major stakeholders: Employees and Employers.

You are welcome to participate and give input to the Employment Standards Regulation Review.

For a copy of the general review package and questionnaires, or specific industry package, contact Alberta Labour Employment Standards in Edmonton - toll-free by dialing 310-0000 then enter 422-3311, or my offices 216-5454 (Calgary) or 415-0984 (Edmonton) or your MLA offices.

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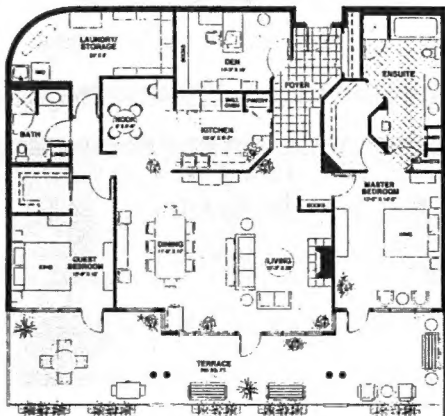
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positions

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AHFMR RESEARCH LIBRARIAN

The University of Alberta Library is seeking a full-time librarian, for a two-year contract. The incumbent will work primarily to provide support to the Alberta Heritage Foundation for Medical Research, in particular, to their programs of peer review in grant applications and health technology assessment. The position will evolve to include other activities. The librarian will be an employee of the University of Alberta and be located in the University of Alberta's John W. Scott Health Sciences Library.

Responsibilities include:

- subject analysis of grant requests
- on-line searching, primarily of medical and pharmaceutical commercial and Internet databases, with occasional use of engineering, business and social science databases
- analysis of search results to identify related research and researchers
- obtain documents on request
- develop and maintain a small core of relevant information sources at the Foundation

- participate in the information service activities of the John W. Scott Health Sciences Library
- participate in the teaching program of the John W. Scott Health Sciences Library, including Internet training

Requirements:

- Masters degree in library science
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To apply, please send a letter, current resume and names of three references to
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Library Administration
Cameron Library
University of Alberta
Edmonton, AB T6G 2J8
Fax: (403) 492-8302

events

EXHIBITIONS

FAB GALLERY

March 10 to 29

"Printmaking from the Royal College of Art: The Tim Mara Years, 1900-1997." Gallery hours: Tuesday to Friday, 10 a.m. to 5 p.m.; Sunday, 2 to 5 p.m.; Monday, Saturday and statutory holidays, closed. 1-1 Fine Arts Building.

McMULLEN GALLERY

March 7 to May 2

"Laughter is the Best Medicine—The Art of the Cartoon"—a light hearted look at life through the work of thirteen local artists who are members of The Cartoonists' Union. Gallery hours: Monday to Friday, 10 a.m. to 4 p.m.; Tuesday, Wednesday, Thursday, 5 to 8 p.m. (subject to availability of volunteers). Information: 492-8428 or 492-4211. Mackenzie Health Sciences Centre.

ST. JOSEPH'S COLLEGE

March and April

An art exhibit of oil paintings done by world renowned artist Sr. Immolata Meyen will be displayed in the main corridor of St. Joseph's College. Join the artist for doughnuts and coffee on March 8 between 10:30 a.m. to 12:30 p.m. at St. Joseph's College.

MUSIC

DEPARTMENT OF MUSIC

March 8, 8 p.m.

The University of Alberta Academy Strings Concert. Martin Risely, conductor. Admission: \$7/adult, \$5/student/senior. Convocation Hall.

March 13, 8 p.m.

Music at Convocation Hall Series featuring William H. Street, saxophone, and friends. Admission: \$10/adult, \$5/student/senior. Convocation Hall.

March 15, 8 p.m.

The University of Alberta Madrigal Singers Concert. Leonard Ratzlaff, conductor. Admission: \$7/adult, \$5/student/senior. McDougall United Church, 10066 MacDonald Drive.

March 18, 8 p.m.

Master of Music Recital: Rebecca Chu, piano. Convocation Hall.

NOMINATIONS FOR 3M TEACHING FELLOWSHIPS SOUGHT

The University of Alberta has received 17 awards during the 12-year existence of the national 3M Teaching Fellowships Program. In conjunction with the start of the 1998 competition, Bente Roed, director, University Teaching Services (UTS), says, "We have many other outstanding instructors who warrant identification and nominations."

The Fellowships are awarded by the Society for Teaching and Learning in Higher Education and 3M Canada Inc. Any individual currently teaching at a Canadian university (regardless of discipline or level of appointment) is eligible.

An exclusive three-day (November 8-10, 1998), all expenses paid, retreat at the Chateau Montebello is the main component of the award.

Up to 10 awards are given annually. Nomination forms are available from UTS, 215 Central Academic Building, telephone 492-2826. Dossiers are to reach the Society for Teaching and Learning in Higher Education, by May 5, 1998 but if a letter from the Vice-President (Academic) is required, the nomination package must reach UTS by April 30.

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LIBRARY BOOK SALE

The University of Alberta Library is having a book sale March 18 and 19, 1998 from 9 a.m. to 3 p.m., lower floor Cameron Library.

CAREER AND PLACEMENT SERVICES (CAPS) CAREER FORUMS

Human Ecology, Wed. March 11, 5 p.m., Room 4-02 SUB

Physical Education, Thurs. March 12, 5 p.m., Room 4-02 SUB

Chemistry, Thurs. March 12, 6 p.m., CAB 273

Starting Your Own Business, Tues. March 17, 5 p.m., CAB 273

Environmental Science, Wed. March 18, 6 p.m. in Mech. Eng. 2-1

Art & Design, Wed. March 25.5 p.m, 220 FAB

Cost for students is \$4.00 in advance at CaPS, 2-100 SUB, or \$5.00 at the door. Cost for non-students is \$8.00.

UNIVERSITY OF WOMEN MEET

The monthly meeting of the Canadian Federation of University Women (Edmonton) will be held Monday, March 16, 1998 at 7 p.m. at the U of A Faculty Club, 11435 Saskatchewan Drive. Guest speakers will be Edmonton Chamber of Commerce Past Presidents Cheryl Knebel, president and CEO, Cistrad Corporation, and Janet Riopel, president, TREYL Consulting Group. They will speak on networking and mentoring. All women university graduates are welcome. For more information, call 430-5383.

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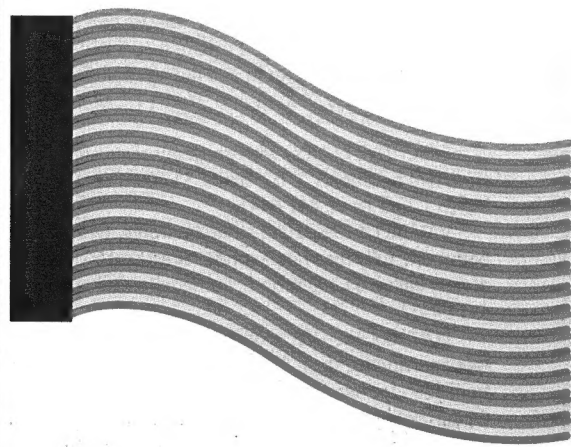
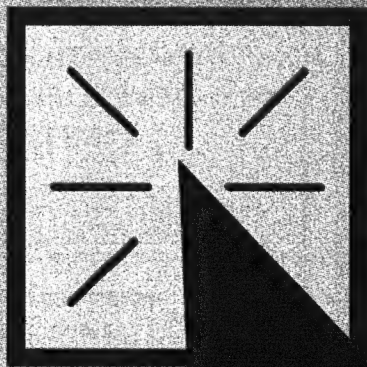
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Brain Power



By Deborah Johnston

An intelligent mind trapped in a completely disabled body. It must be desperately frustrating... lonely... hopeless. We have no way of really knowing what it must be like—because such severely disabled people are unable to tell us.

But a team of researchers in the University of Alberta Faculty of Rehabilitation Medicine is listening carefully—not to what people say—to what they think. The human brain, says Dr. Aleksandar Kostov, research assistant professor, produces thought patterns or brain waves, that can be isolated and used to operate a computer. "Our goal," says Kostov, "is that somebody sitting in front of a computer can one day type on a virtual keyboard, move a mouse and click using only their brain waves."

The experimental technology works like this: a human subject wears a cap fitted with electronic sensors attached to a computer. The subject faces a computer screen and by concentrating on repetitive thoughts, "wills" a giant cursor to move up or down.

These repetitive thought patterns, Kostov says, produce different brain waves that are picked up by electrodes on the

"Our goal is that

somebody sitting

in front of a

computer can one

day type on a virtual

keyboard, move a

mouse and click

using only their

brain waves."

Dr. Aleksandar Kostov

however, it's mind-boggling. Kostov says it's a bit like placing a microphone over the Coliseum during a hockey game and trying to concentrate on a conversation between two people in the second row. And after you find the two people, Kostov laughs, you'd have to teach them to say the same thing

over and over so the computer can learn to recognize the words. "We have two learning bodies in this process," Kostov says.

"One is a machine and one is a human. To put these together and operate in real time is an extremely difficult task."

To "teach" the computer, Kostov uses very powerful artificial neural network technology known as Adaptive Logic Networks. The technology, provided through collaboration with Dendronic Decisions Ltd., "has proven to be very successful in pattern recognition and we have already used it in some other assistive devices," Kostov says.

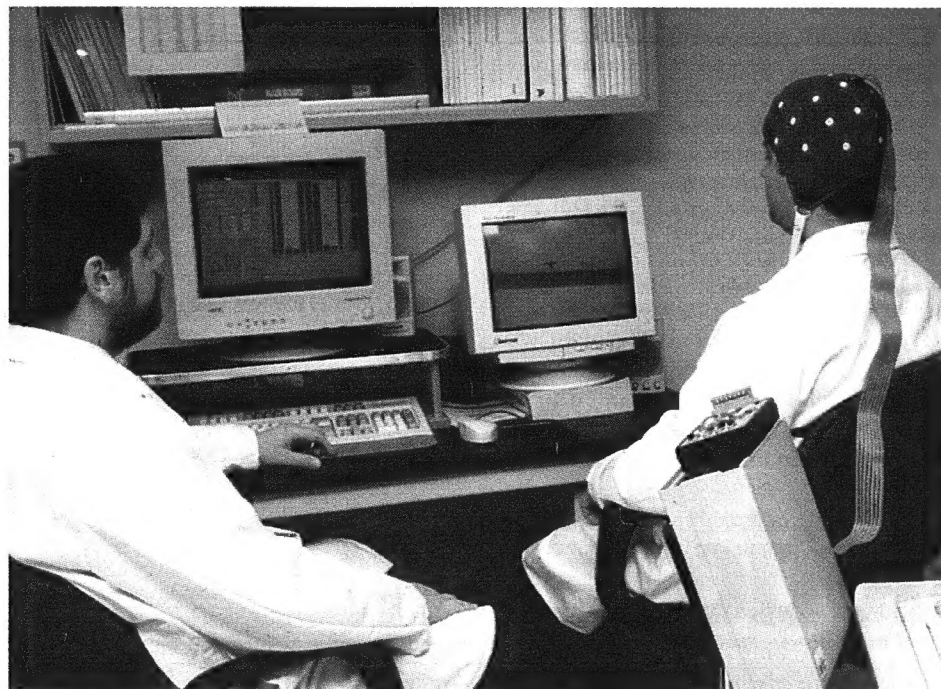
It can take up to seventy, one-hour sessions to train the human and computer to understand each other, although some of Kostov's subjects catch on in less than 10 sessions. Kostov says the process is physically and mentally fatiguing. As one of the study participants, he knows firsthand what it's like. "In the beginning, it is exhausting. You feel like you've just written a very difficult exam."

"One of our goals is to reduce the training time such that this becomes usable and somebody gets the benefit without being exhausted completely."

The possibilities that may result from this technology are marvelous. Persons with severe physical limitations may at last be able to communicate. For that matter, they could turn on lights, television sets, radios—and achieve some independence by using their brain waves instead of their body. It may sound like the stuff of science fiction movies, but Kostov says not only is it possible, it's almost a reality. "There is no magic to this. Everybody can be trained to produce various thought patterns."

Presently, the technology only allows for one-dimensional movements on the screen—the cursor can move up and down, not from side to side. Kostov says he has two options for furthering the technology: he can attempt to use the existing technology with currently available applications—or aim for more precise positioning by adapting the technology to allow for two-dimensional movements. "We have to decide where to invest very scarce funding," Kostov says. "We still feel there is a capacity for new discoveries here. We want to make breakthroughs of precise positioning on the screen. If we achieve

Scientists harness human thought patterns—and open the door to the impossible



Researchers Aleksandar Kostov and his graduate student Mark Polak (wearing electrode cap) test the Brain Computer Interface.

this, we will be able to use any Windows or Macintosh applications."

Kostov admits this technology will be of interest to a relatively small sector of the population—the severely disabled—but will mean dramatic improvements to

their lives. "Imagine somebody being locked in for so many years and then finally being able to open the door to more independent life. I work with these people every day," Kostov says, "and I know they have much to say." ■

Please see *Virtual Nervous Systems* page 7

folio **back**
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